WEBINAR / LIVESTEAM

January 2025

Analytical investigations of “mysterious spider threads”

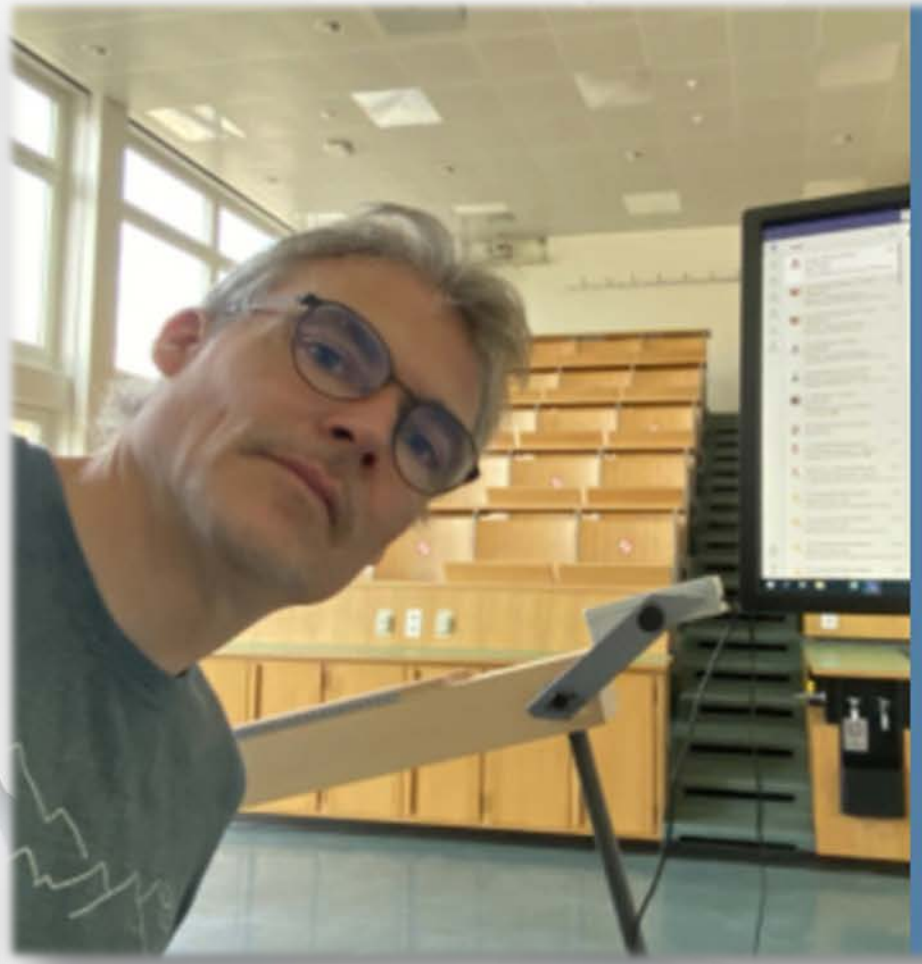
Philipp Zeller, Dr. Sc. Nat., Dipl. Physiker ETH
Hansjoerg Grether, Dipl.-Ing. / Application Chemist
Christian Oesch, President Swiss Association WIR

Swiss association WIR

“WIR” for effectiveness - intuition - respect

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

“Two proven experts will guide us through the webinar”



Philipp Zeller

Dr. Sc. Nat., Dipl. Physicist ETH

- Studied physics at ETH Zurich & completed a doctorate at the University of Neuchâtel on the subject of optical biosensors, followed by several years of R&D in medical technology and diagnostic devices
- Increasing focus on patents and patent strategies
- Most recently lecturer at a Swiss university

Anyone who looks for clues is naturally always lagging behind. Especially when the clues are erased and the activities are kept secret. Our search for clues is therefore only a first step. Many people are needed to demand transparency from those responsible so that such machinations can finally be stopped.

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

“Two proven experts will guide us through the webinar”

Hansjörg Grether

Dipl.-Ing. / Application Chemist

- March 2017–Today: Expert for analytical applications – Portmann Instruments
- 2009 – 2017: Head of Analytics – BASF Schweiz AG

It is frightening how advanced the biological and technical developments in the um/nm range are and how they are being unleashed on people and nature - without asking the population. This must be investigated by official bodies and any further actions must be stopped immediately.

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Analytical investigations of “mysterious spider threads”

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Analytical investigations of “mysterious spider threads”

Copyright © 2024 | Schweizerischer Verein WIR | www.vereinwir.ch | alle Rechte vorbehalten

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

0.515.06

AS **1988** 1888; BBl **1987** III 797

Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques

Adopted in New York on December 10, 1976
Approved by the Federal Assembly on March 18, 1988
Swiss Instrument of Ratification deposited on August 5, 1988
Entered into force for Switzerland on August 5, 1988

(Status as of May 15, 2020)

[1] AS **1988** 1887

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

0.515.06

AS **1988** 1888; BBl **1987** III 797

Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques

Article III

This Convention does not preclude the use of environmental modification techniques for peaceful purposes and does not affect the generally recognized principles and applicable rules of international law concerning such use.

[1] AS **1988** 1887

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Analytical investigations of "mysterious spider threads"
Applied techniques and methods

- Fourier Transformation Infrared Spectroscopy *(FTIR-)* using ATR-measuring technique (*A*ttenuated *T*otal *R*eflectence) of both the threads and solvent extraction
- Element Analysis with Inductively coupled Plasma Mass Spectrometry *(ICP-MS)* of the thread material
- Optical Microscopy with Microtome sections/cuts of thread embeddings
- Scanning Electron Microscopy *(SEM)* equipped with Energy-dispersive X-ray Spectroscopy *(SEM-EDX)* of the threads
- SEM with Microtome sections of thread embeddings
- Pyrolysis Gas Chromatography coupled with Mass Spectrometry *(Py-GCMS)* of the thread material
- Gas Chromatography Mass Spectrometry *(GCMS)* with the solvent extraction of the thread material

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Summary of the investigations of “mysterious threads” - 1

- According to FTIR and Pyrolysis-GCMS investigations, the thread materials - collected at various locations in Switzerland – are based on natural polyamides derived from amino acids (possibly including their derivatives) and NEITHER on synthetic polyamides such as PA 6, PA 66, etc. (products such as Nylon® 6 or Nylon® 66) NOR other plastics like PET, PE, PP etc.
- In addition to carbon (C) and hydrogen (H), the element analysis also revealed nitrogen (N) and sulphur (S, 0.2%); the latter is this, indicative of the amino acid cysteine. Metals were only detected in traces except for a slightly elevated aluminum value
- It could be clearly demonstrated by Scanning Electron Microscopy (SEM) that the fibers with an outer diameter of approx. 4-6µm [4000-6000nm] are hollow INSIDE with a diameter of approx. (1)2-3µm [(1000)2000-3000nm]. Light microscopic images of the fiber cross-sections prove this, and the SEM images show that the nanoscale fibers are filled with material, i.e. chemical substances
- Solvent extractions of the fiber material revealed extractable material and by using FTIR and GCMS analysis > 30 different substances were detected. These include aliphatic, saturated/unsaturated, cyclic and aromatic hydrocarbons (including benzene derivatives), ketones, acrylic acid derivatives, epoxides and histamine derivatives, to name but a few. The GHS*) hazard labeling of these substances shows pictograms for “HIGHLY FLAMMABLE” / “CAUTION HAZARDOUS” / ‘CORROSIVE’ / “HIGHLY TOXIC” according to the corresponding Safety Data Sheet (SDS)

*) Globally Harmonized System of Classification and Labelling of Chemicals

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Summary of the investigations of “mysterious threads” - 2

CAUTION HAZARDOUS • May irritate skin, cause allergies or eczema, cause drowsiness • May cause poisoning after single contact • May damage the ozone layer	**HIGHLY TOXIC** • May cause severe poisoning and death even in small quantities	**CORROSIVE** • May cause severe skin burns and eye damage • May dissolve certain materials (e.g. textiles) • Is harmful to animals, plants and organic material of all kinds	**HARMFUL TO HEALTH** • May cause damage to certain organs • May cause immediate and long-term serious damage to health, cause cancer, damage genetic material, fertility or development • May be fatal if it enters the respiratory tract	**HAZARDOUS TO WATER** • May cause acute or long-term damage to aquatic organisms such as fish, aquatic insects and aquatic plants in low concentrations	**HIGHLY FLAMMABLE** • May ignite through contact with flames and sparks, impact, friction, heating, air or water contact • Can ignite spontaneously without external influence if stored incorrectly

Globally Harmonized System of Classification and Labelling of Chemicals (GHS) /UNECE (United Nations Economic Commission for Europe)

For **some substances, no hazard labels can be researched** (new or untested trial products ?) or they are **only approved for industrial use !**

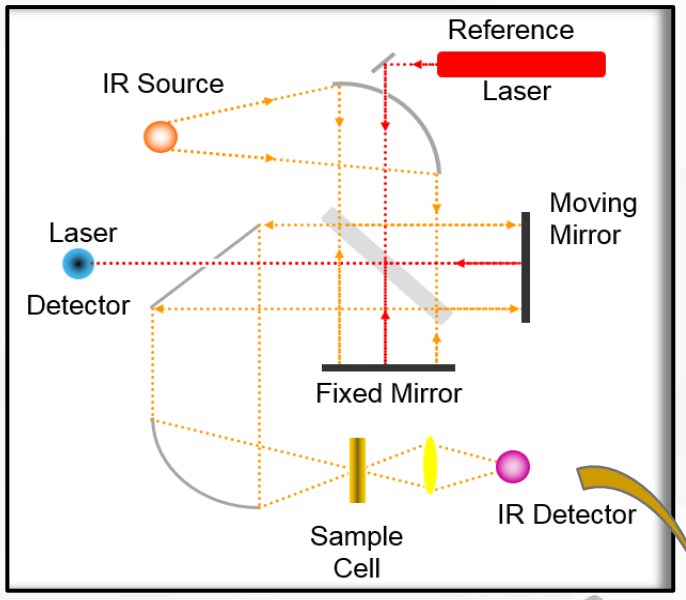
Note:

- *GC-MS studies were performed in EI (electron impact ionization) mode and reported with MS database searched structural suggestions*
- *Various extracts were checked with FTIR, D-ATR, and confirmed overall the GCMS findings*

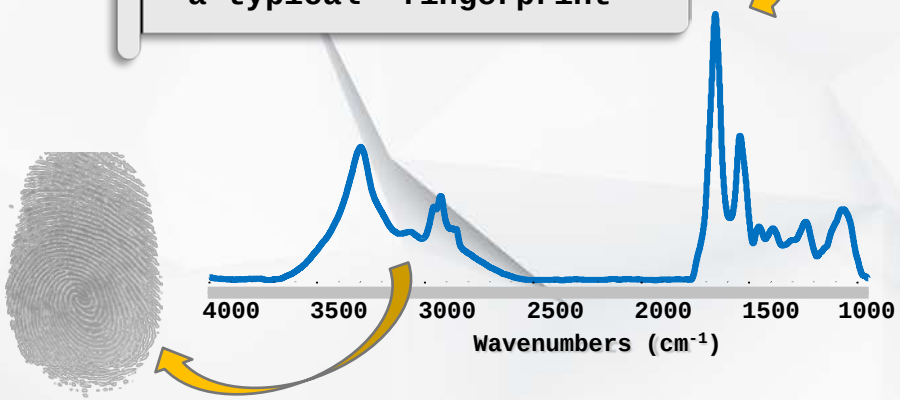
Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

FTIR-Spectra measuring technique

FTIR Spectrometer (schematic)

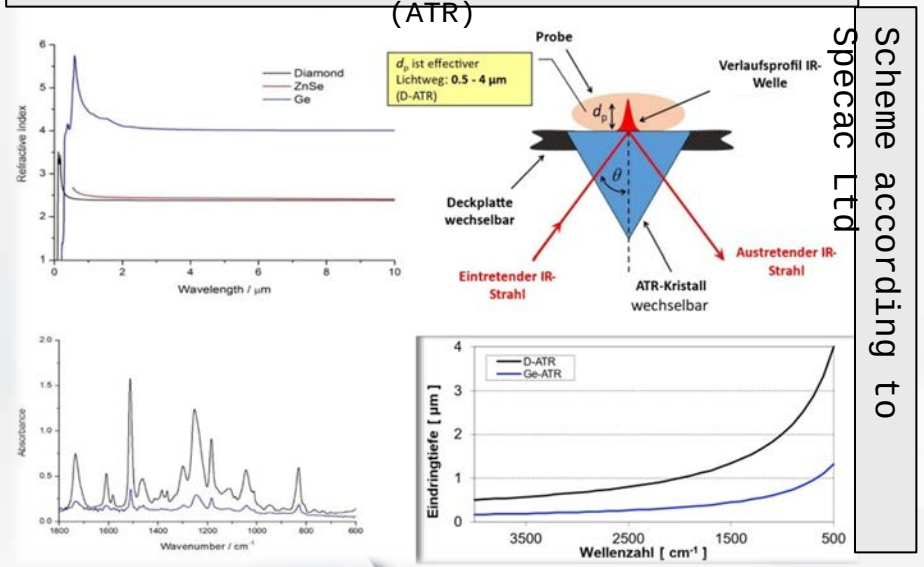


Each sample has a unique IR spectrum and therefore a typical "fingerprint"



Agilent Cary 630® with D-ATR accessory

FTIR measuring technique ATR
Basic principle of **A**ttenuated **T**otal **R**eflectence (ATR)



Scheme according to Specac Ltd

Fourier Transform Infrared Spectroscopy (FTIR)

- *FTIR s a technique used to obtain an infrared spectrum of the absorption or emission of a solid, liquid or gas.*
- *An FTIR spectrometer simultaneously collects data with high spectral resolution over a wide spectral range*
- *The term Fourier Transform infrared spectroscopy originates from the fact that a Fourier transform (a mathematical process) is required to convert the raw data into a spectrum*
- *Using different ATR crystals (D = Diamond, Ge = Germanium…) the penetration depth varies along the spectral IR wavelength range*

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

FTIR-Spectrum thread 3-47, measuring technique D-ATR, 64scans

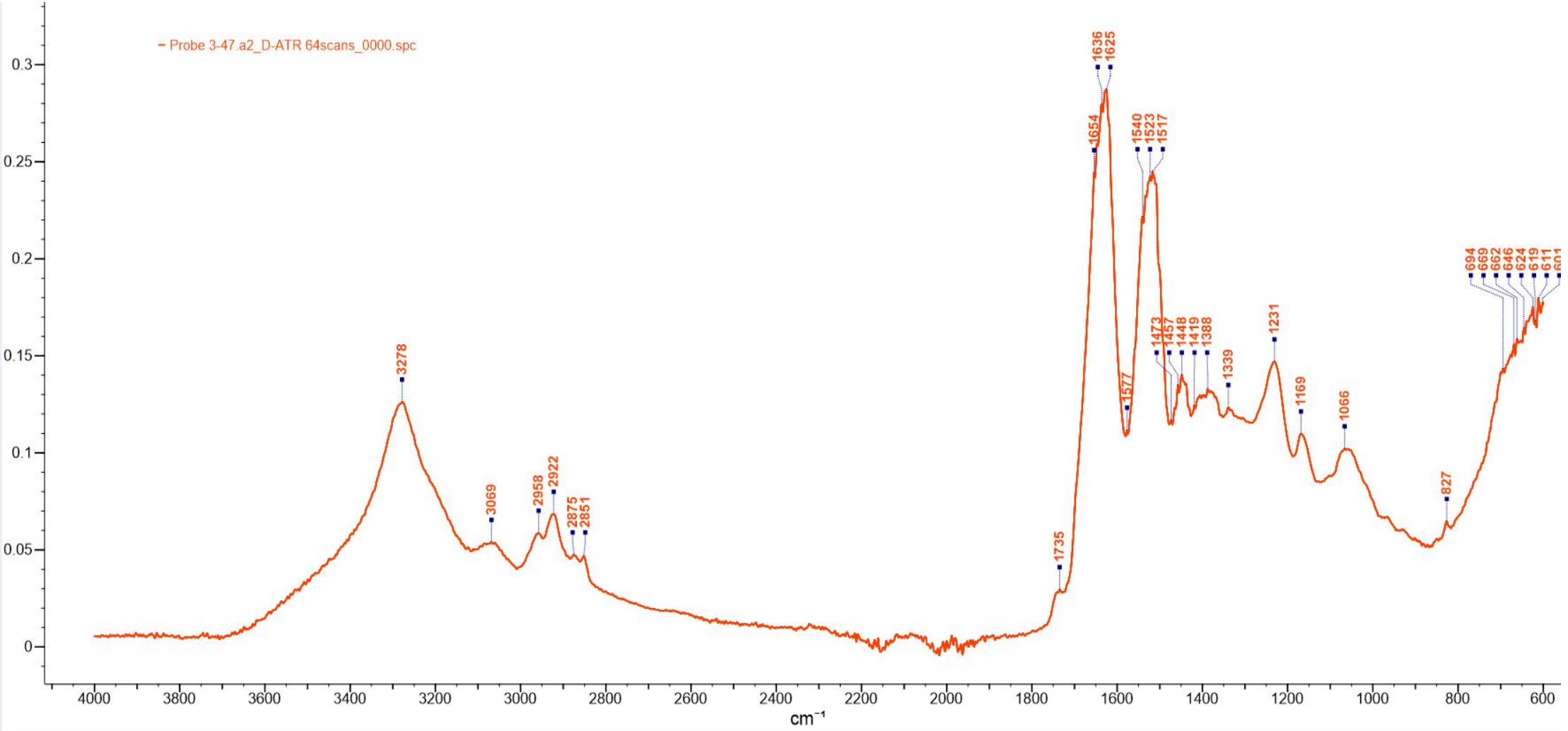


Fig 1: FTIR D-ATR of thread 3-47, spectral range 4000-600cm^{-1}. It is striking that the amide bands (amide I around 1600cm^{-1}; amide II around 1500cm^{-1}) probably contain several amides (from different amino acids or their derivatives / modifications ?)

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

FTIR-Spectrum thread 3-47, measuring technique D-ATR, 64scans, expanded

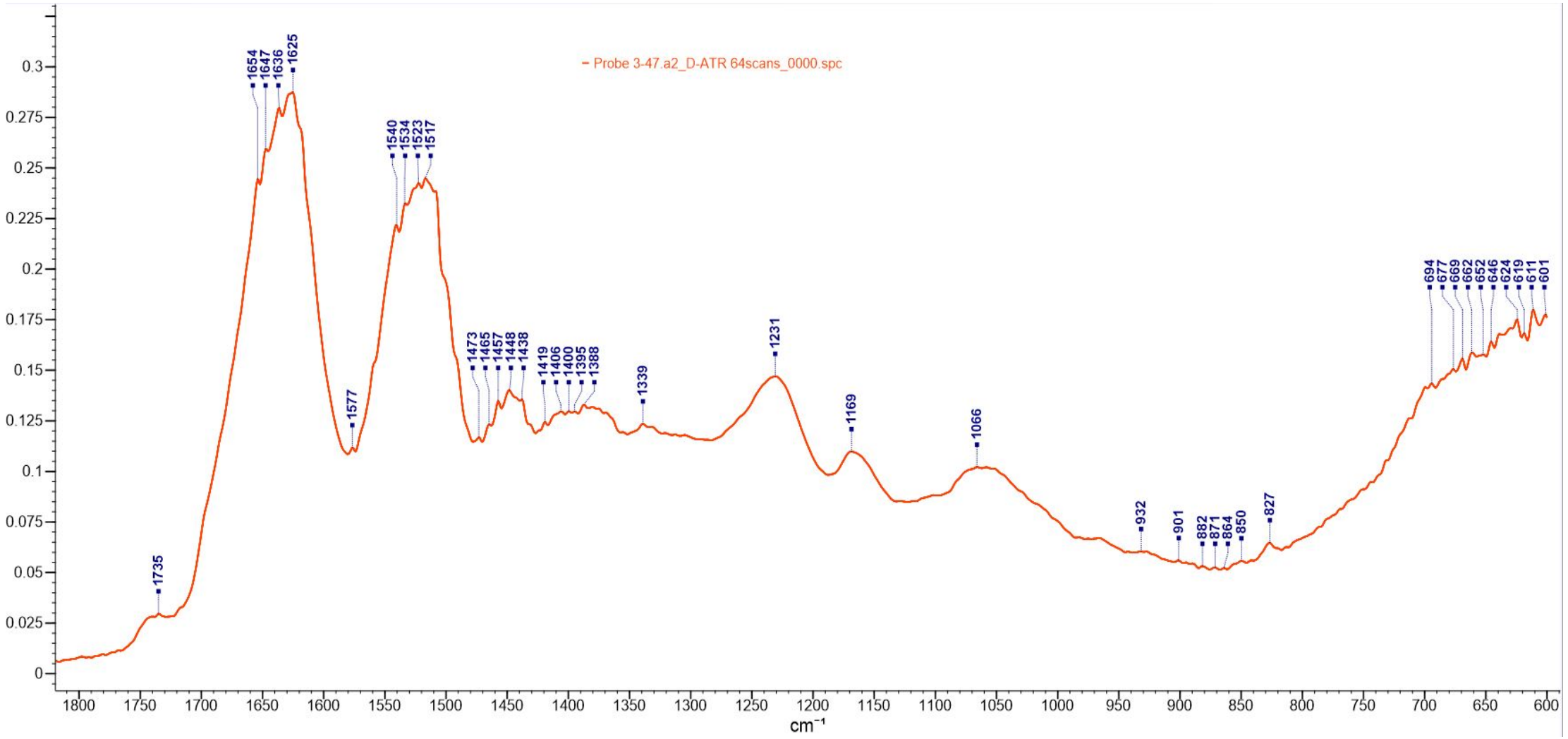


Fig 2: FTIR D-ATR of thread 3-47, spectral range 1800-600cm^{-1}. Noticeable in the amide bands (amide I around 1600cm^{-1}; amide II around 1500cm^{-1}) are several amides/amino acids with wavelengths 1654, 1674, 1634, 1625cm^{-1} / 1540, 1534, 1523, 1517cm^{-1}

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

FTIR-Spectrum thread 3-47, compared with technical Polyamides (PA / Nylon®)

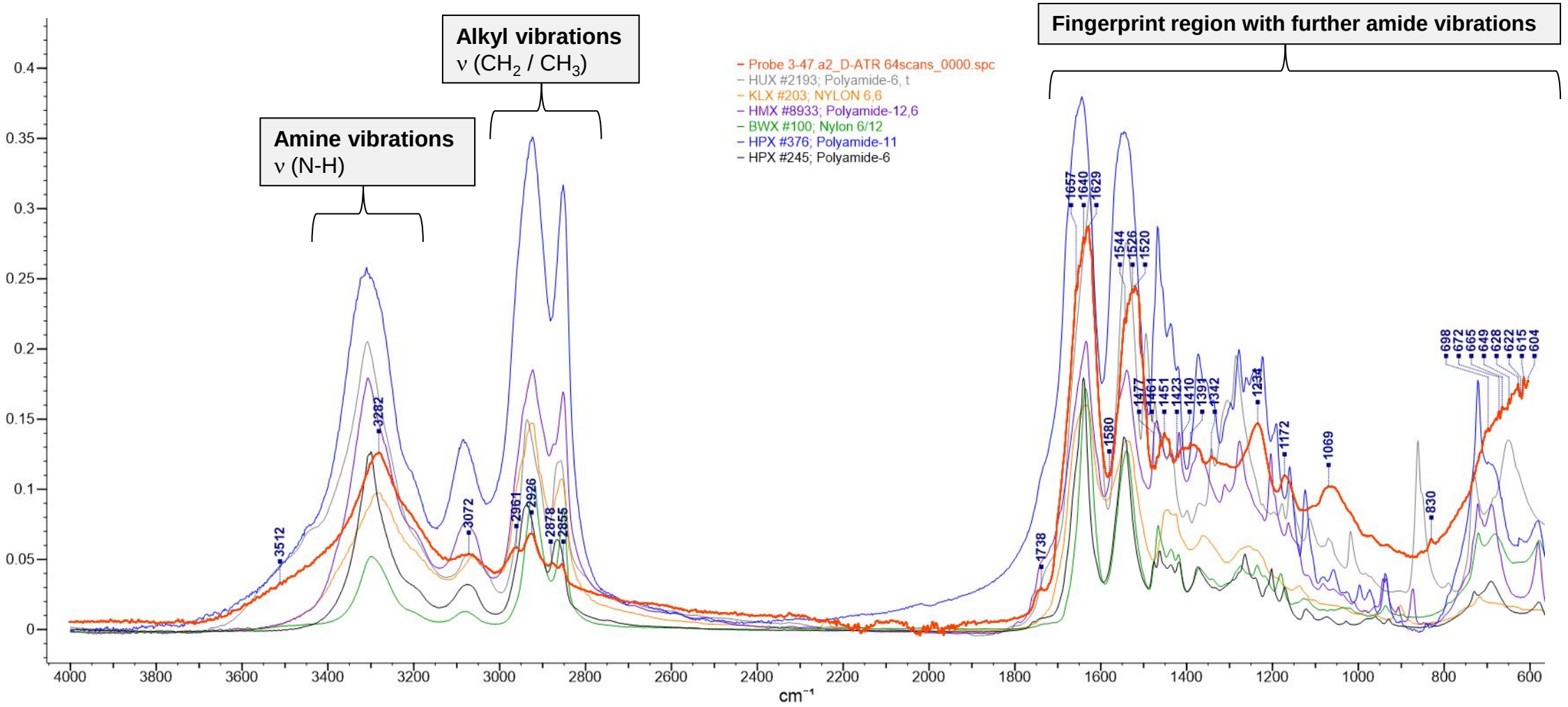


Fig 3: Thread 3-47 *(red line),* FTIR D-ATR measurement technique in the spectral range 4000-600cm-1, overlaid with technical (synthetically produced) PAs such as PA6, 66, 11, 12... or thread mixtures/commercial products such as Nylon® etc. The reference spectra ex IR databases differ significantly in the alkyl vibration range between 3000-2800cm^{-1} in terms of intensities (i.e. different aliphatic chain lengths)

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

FTIR-Spectrum thread 3-47, compared with technical Polyamides (PA / Nylon®) expanded

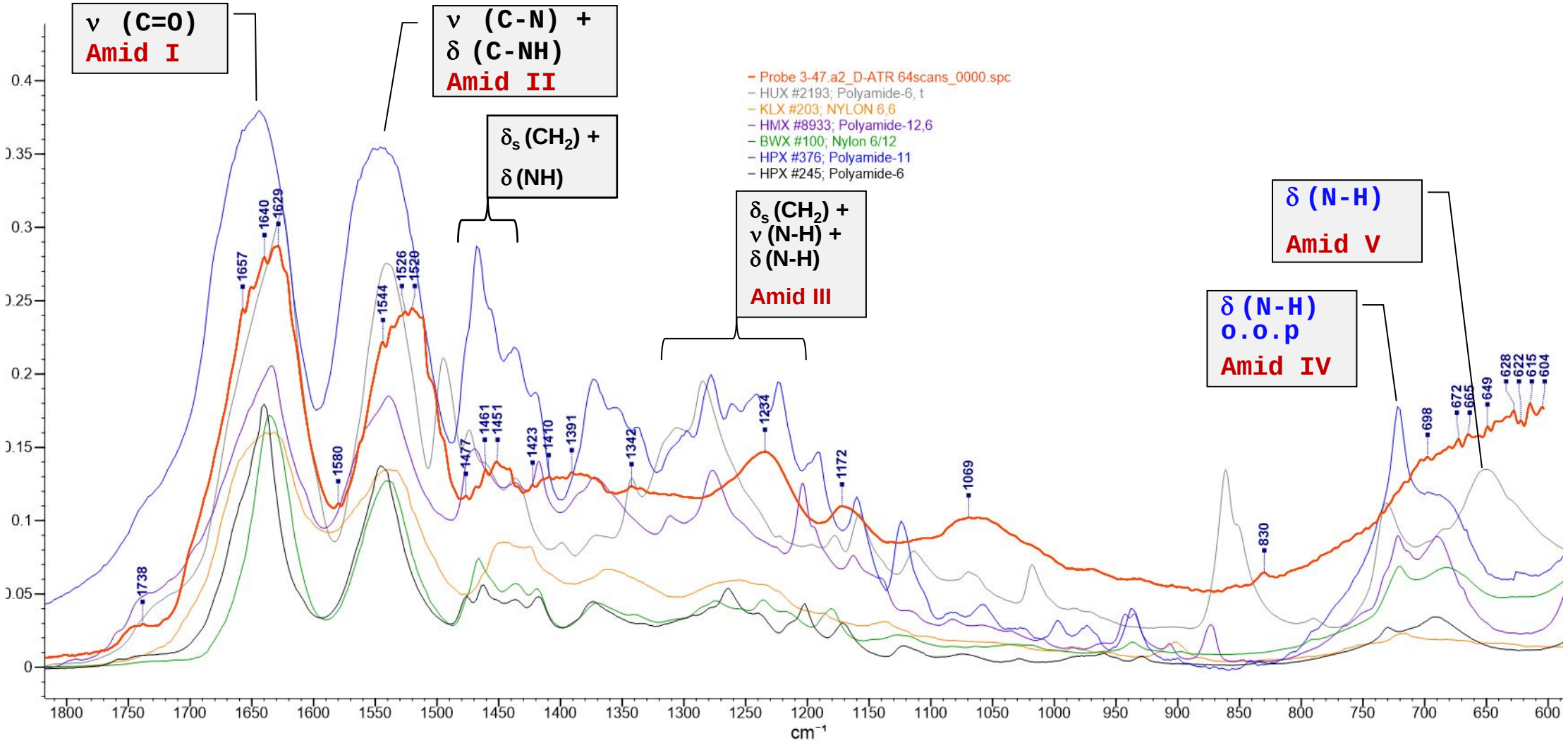


Fig 4: Thread 3-47 (*red line*), same as *Fig 3.* but spectral range 1800-600cm^{-1}. The reference PA spectra ex IR databases differ very clearly for amide I & II with regard to band shape and structure as well as in the entire fingerprint region (<1500cm^{-1}). The typical amide III, IV and partially V bands are missing. This means that conventionally (technically) produced PAs can be excluded. In addition, an ester, keton and acid band (1738cm^{-1}, broad) and possibly an aromatic variant are present (1580cm^{-1}).

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

FTIR-Spectrum thread 3-47 / IR-Database search / Interpretation - 1

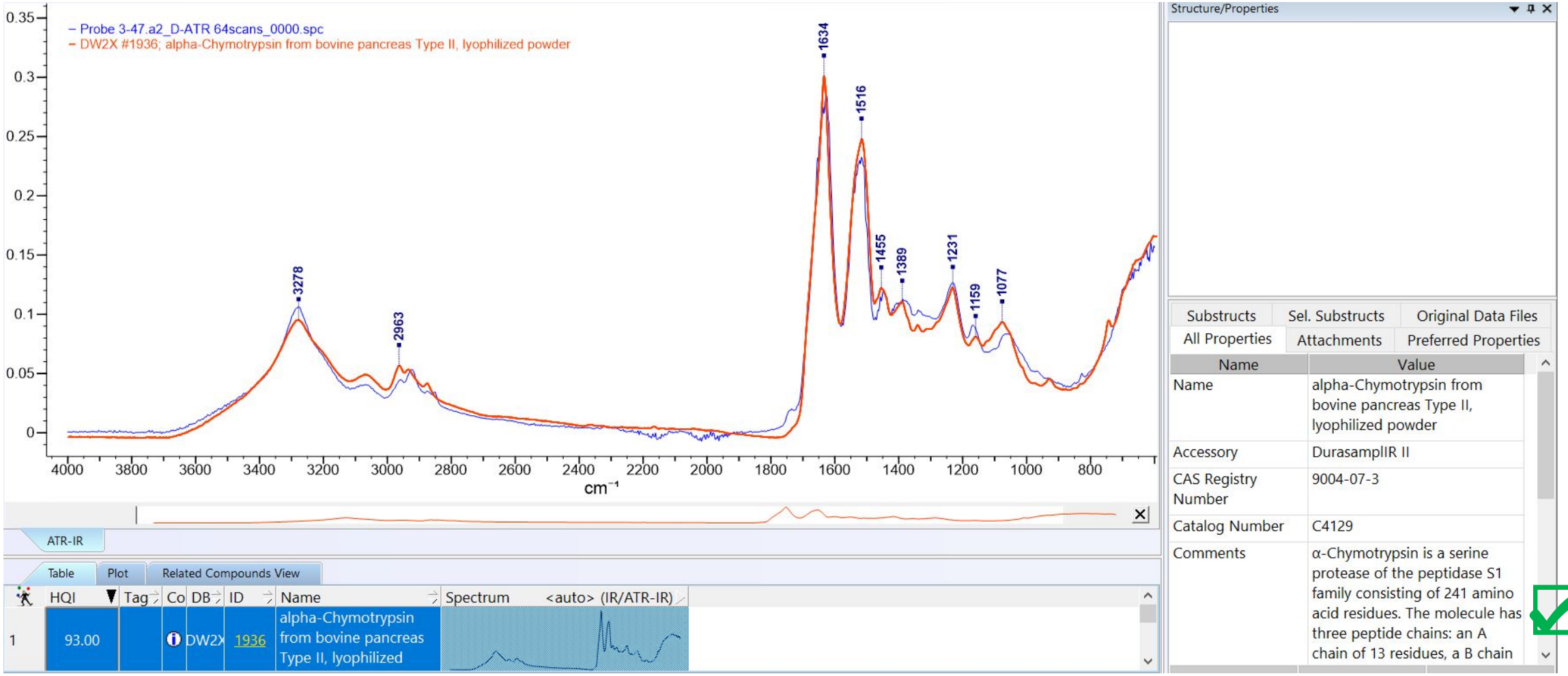


Fig 5: Thread 3-47 (*blue line*), D-ATR IR measurement technique, spectral range 4000-600cm^{-1}, overlaid with IR-DB hit (93% agreement) α-chymotrypsin. Identical in terms of band positions and intensities, which agrees well with the absorption bands found in the corresponding frequency ranges of thread 3-47

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

FTIR-Spectrum thread 3-47 / IR-Database search / Interpretation - 2

Fig 6: Thread 3-47 (*blue line*), *see Fig 5*; spectral range 1750-600cm^{-1}, overlaid with IR-DB hit (93% match) α-chymotrypsin

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

FTIR-Spectrum thread 3-47 / IR-Database search / Interpretation - 3

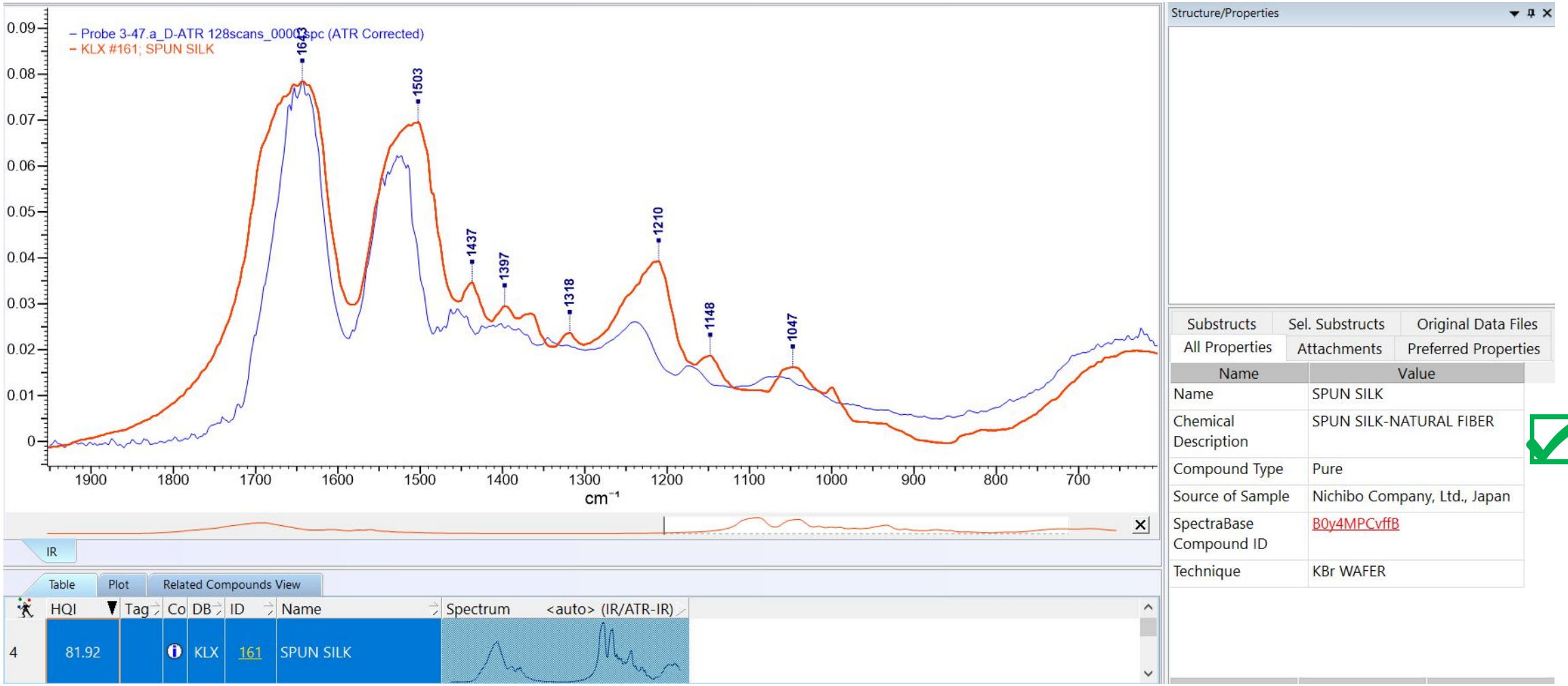


Fig 7: Thread 3-47 (*blue line*), overlaid with IR-DB hit (82% match) Spider silk or schappe silk = inferior silk material of the cocoon, consisting of fibroin or 3-4 amino acids

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

FTIR-Spectra of further threads from Dietlikon 9.2022, “no-name”, Hinwil, Riedtwil, Greppen, Wynigen

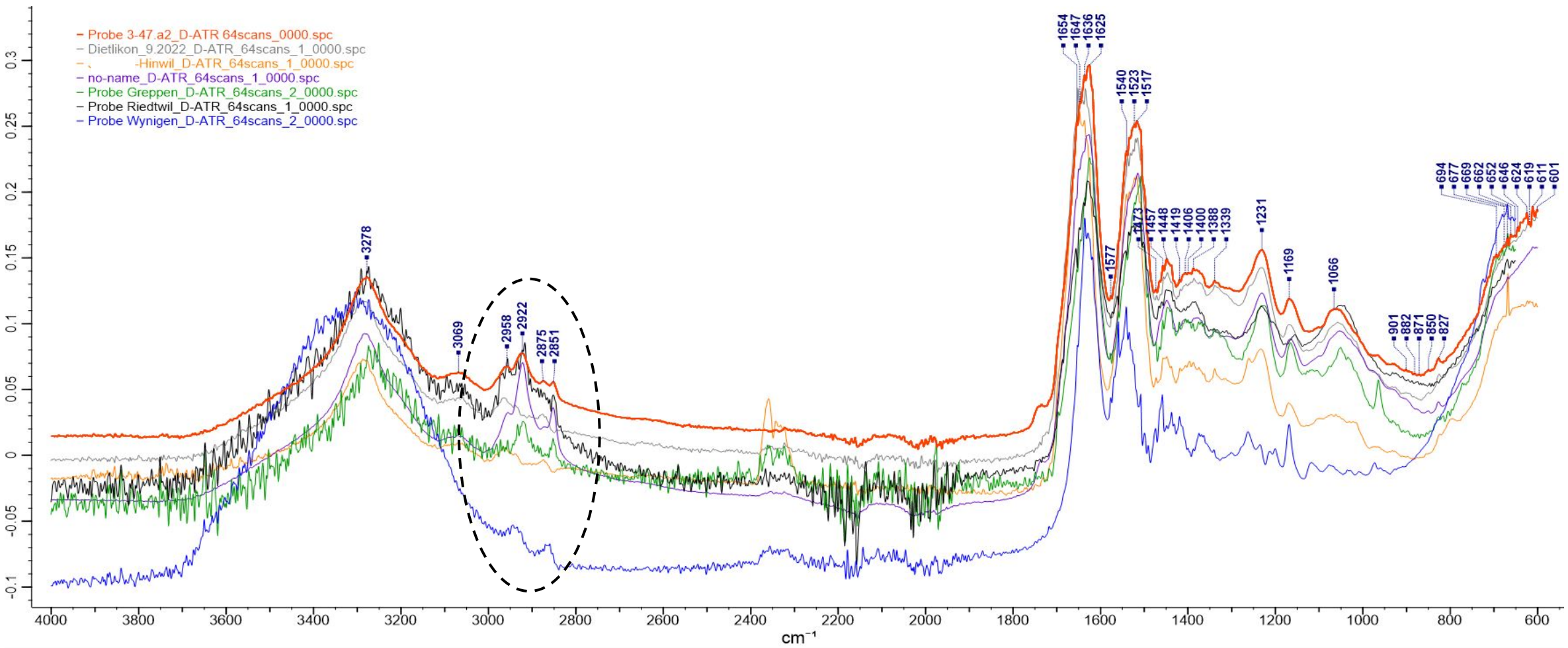


Fig 8: IR spectra of all threads collected near Dietlikon, “no-name”, Hinwil, Riedtwil, Greppen and Wynigen compared with thread 3-47 (*red line*) in the spectral range 4000-600cm^{-1}. Spectra in fingerprint region quite identical, in the aliphatic bands (3000-2800cm^{-1}) clear differences in intensity can be seen, which indicate different aliphatic modifications (chain length u/o branched) of the amino acid/amido backbone (*see black oval*).

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

FTIR-Spectra of further threads from Dietlikon 9.2022, “no-name”, Hinwil, Riedtwil, Greppen, Wynigen

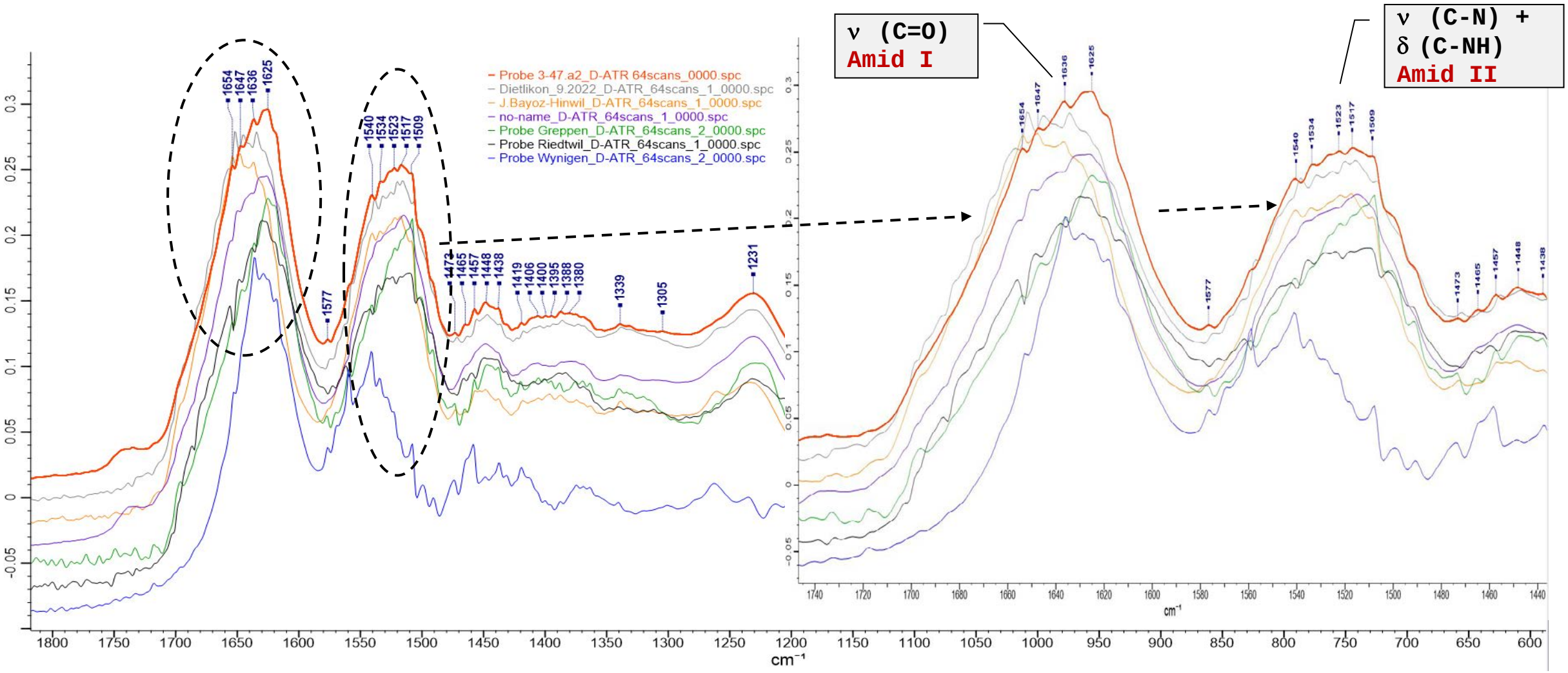
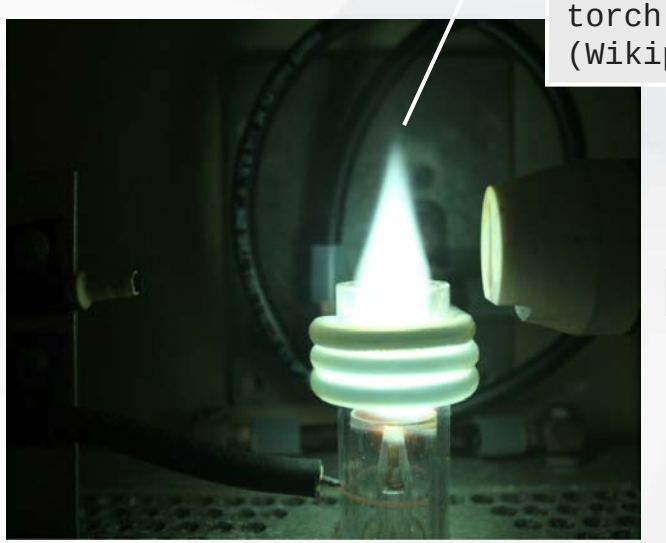


Fig 9: same as *Fig 8*, Spectral range 1800-600cm^{-1} (≈ fingerprint region) and from 1740-1440cm^{-1} (expanded). The 6 new samples show more or less same absorption bands visible in the Amide I band (ca. 1654 -1625cm^{-1}) and similar in Amide II band (ca. 1540-1509cm^{-1}) - except Wynigen, where both bands are weaker (*blue line*)

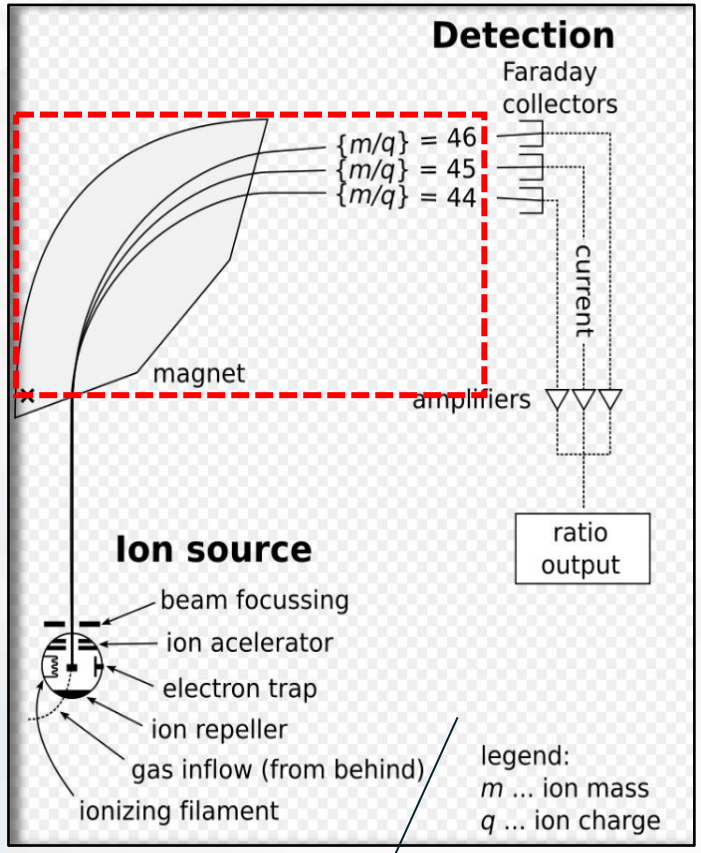
Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Element analytics

ICP-MS / Inductively coupled Plasma Mass Spectrometry



Picture of an analytical ICP torch (Wikipedia)



Schematics of a simple mass spectrometer (Wikipedia)

Inductively coupled Plasma Mass Spectrometry (ICP-MS)

- *Is a type of **mass spectrometer that uses an inductively coupled plasma to ionize the sample.** It atomizes the sample and **creates atomic and small polyatomic ions, which are then detected***
- *It is known and used **to detect metals and non-metals in liquid (dissolved) samples at very low concentrations.** (Wikipedia)*

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Element analysis with ICP-MS, thread 3-47

Element	Result [%]
Carbon (C)	46.3
Hydrogen (H)	6.8
Nitrogen (N)	13.8
Sulfur (S)	0.2

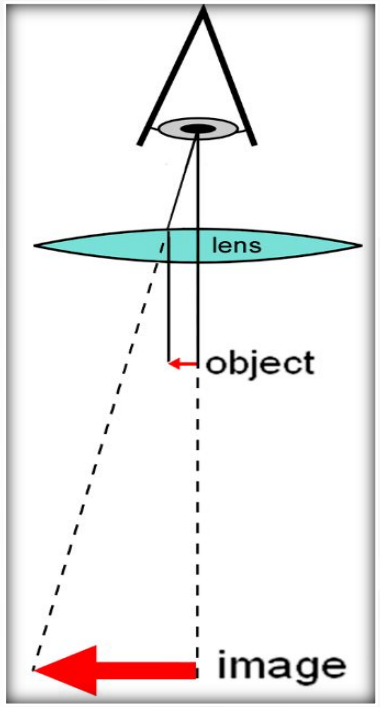
Element	Result [%]
Aluminium (Al)	0.0170
Boron (B)	0.0025
Barium (Ba)	0.0007
Calcium (Ca)	0.000015
Chrome (Cr)	0.0011
Copper (Cu)	0.0028
Iron (Fe)	0.0260
Potassium (K)	0.000031
Magnesium (Mg)	0.0300
Manganese (Mn)	0.0019
Sodium (Na)	0.000040
Nickel (Ni)	0.0011
Phosphorus (P)	0.000012
Lead (Pb)	0.009
Titanium (Ti)	0.0010
Zinc (Zn)	0.0170

< 5mg/kg (ppm): Hg, U, Th, V, Co, As, Zr, Mo, Cd, Sb, Se, Sn, Ta, Te, W, La, Ce, Sc, Sr, Y, Rb, Cs, Ag, Au, Pt, Pd, Ir, Rh, Ru

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Optical (Light) Microscope with Rotary Microtome device

Upright Microscope OLYMPUS®



Scheme of a simple microscope (Wikipedia)

Optical (light) Microscopy:

- *Microscopes produce highly magnified images of small structures or objects using light*
- *The magnification follows the laws of optics using light refraction on glass lenses*
- *In order to recognize structures in the generated image, the image must contain sufficient contrast*

Rotary Microtom SLEE®

Rotary Microtome device

- *A Microtome instrument is a cutting tool used to produce extremely thin slices of material*
- *Important in science, Microtomes are used in microscopy to prepare samples for observation under transmitted light (Optical Microscope) or electron radiation (SEM)*

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Optical Microscopy with embedded threads and corresponding microtom cuts, thread 3-47

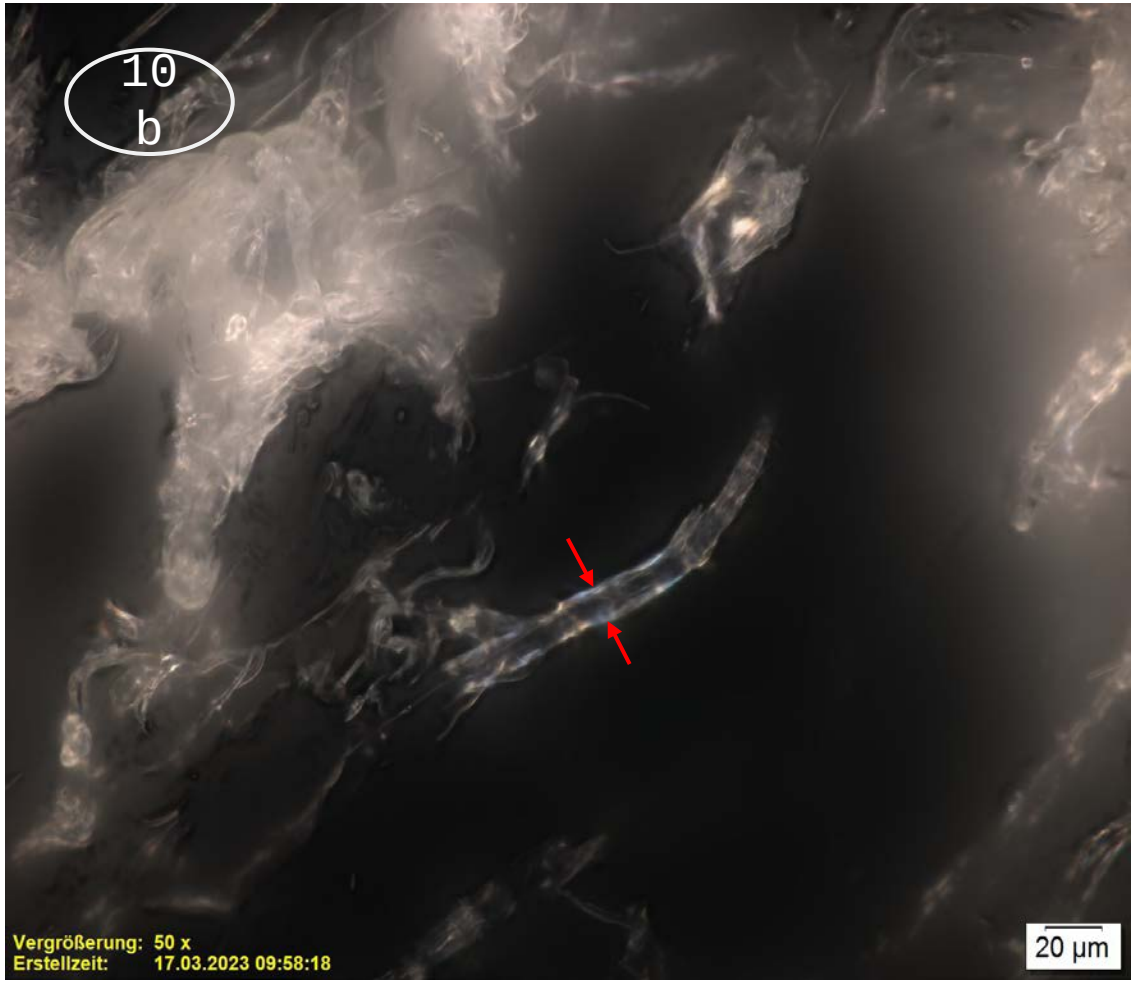


Fig 10a-b: Thread 3-47 embedded in paraffine wax, microtome section, Light Microscope with 500x (50x10) magnification under polarized light and EFI (Extended Focus Imaging). *Fig. 10a* shows various fibers of different thicknesses, all of which are hollow on the inside. *Fig. 10b* shows a hollow thread with a slightly larger diameter and suspected ingredients due to discoloration

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Optical Microscopy with various thread preparations

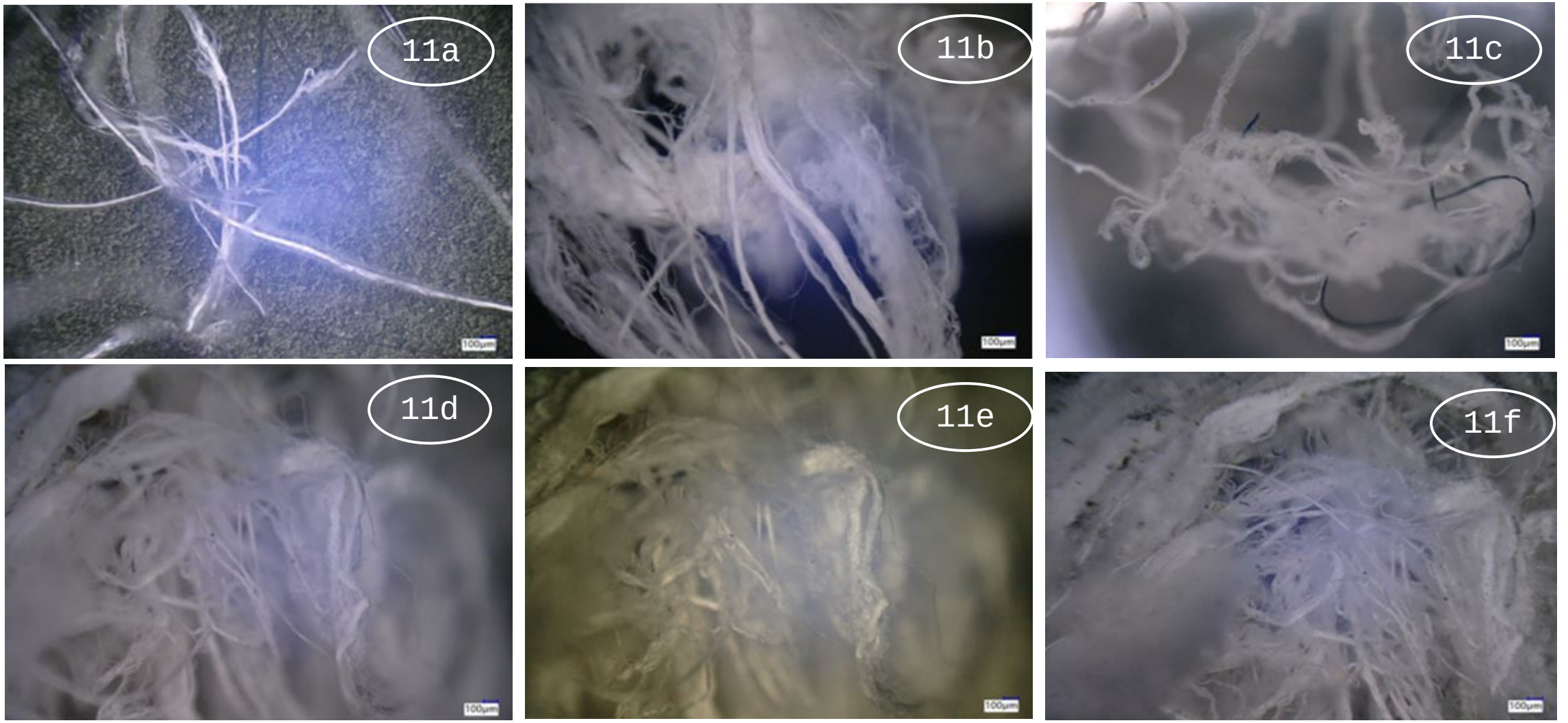
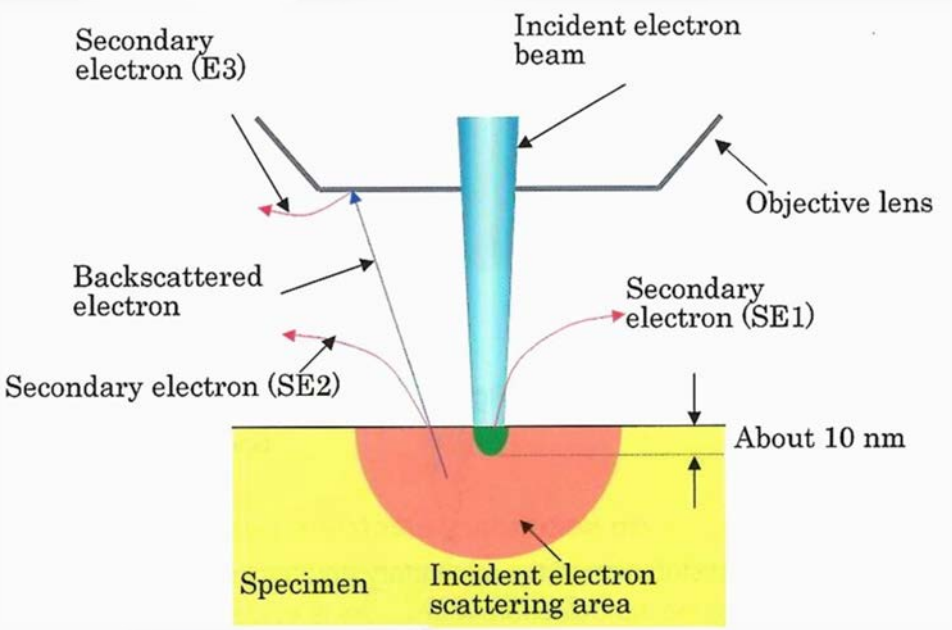
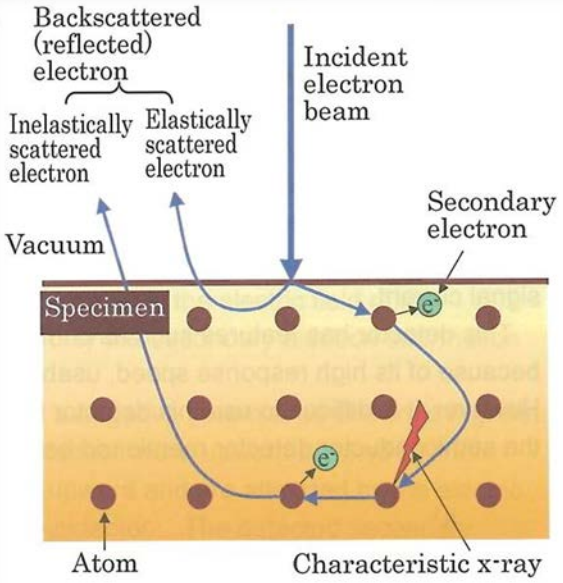


Fig 11a-f: Various thread preparations examined with an Optical Microscope. The images show single fibers and fiber bundles, partially strongly interwoven / entangled. Aspect varies from smooth outer walls to fibrous

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Scanning Electron Microscopy *(SEM)*



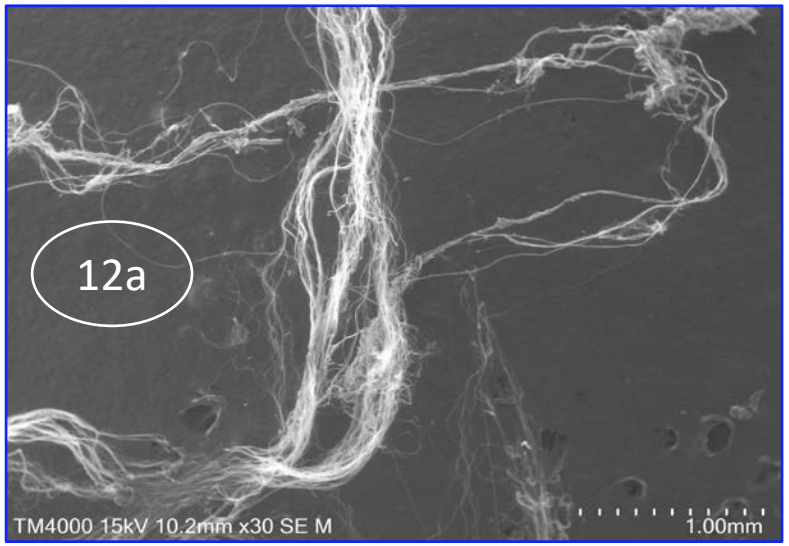


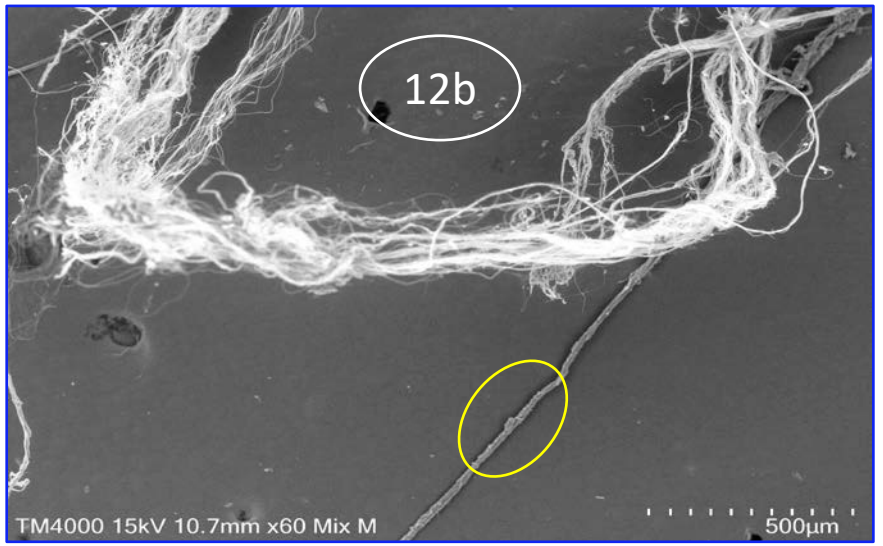
Scanning Electron Microscope

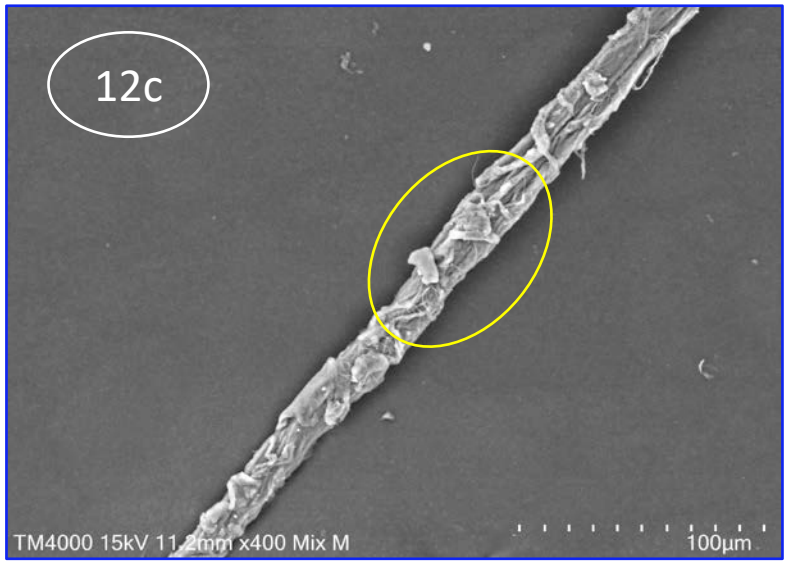
- *A scanning electron microscope is an electron microscope in which an electron beam is guided in a specific pattern over the object to be magnified and interactions between the electrons and the object are used to generate an image of the object.*
- *The images typically produced with a scanning electron microscope are images of the object's surface and have a high depth of field*

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Scanning Electron Microscopy + Energy-dispersive X-ray Spectroscopy *(SEM-EDX)*







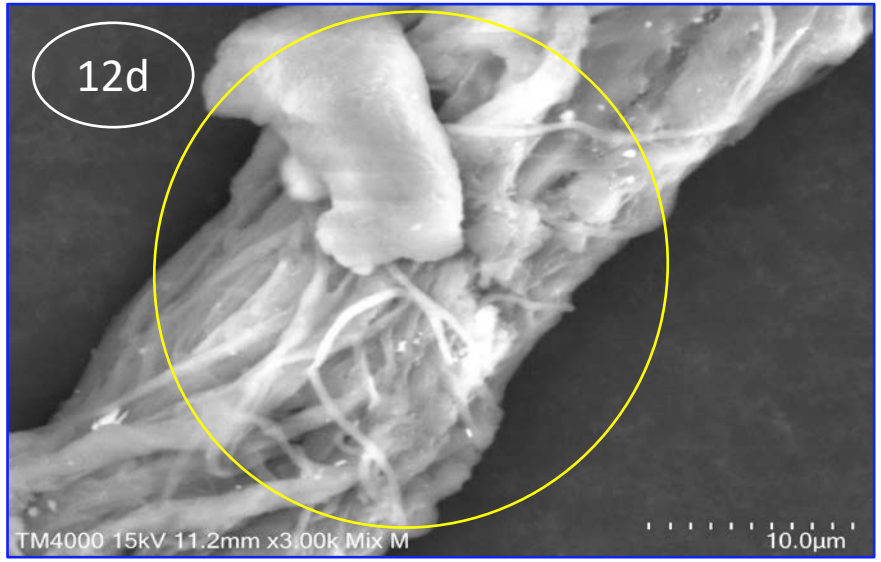


Fig 12 a-d: Threads collected at Hinwil with various magnifications from 30x till 3000x magnification

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Scanning Electron Microscopy + Energy-dispersive X-ray Spectroscopy *(SEM-EDX)*

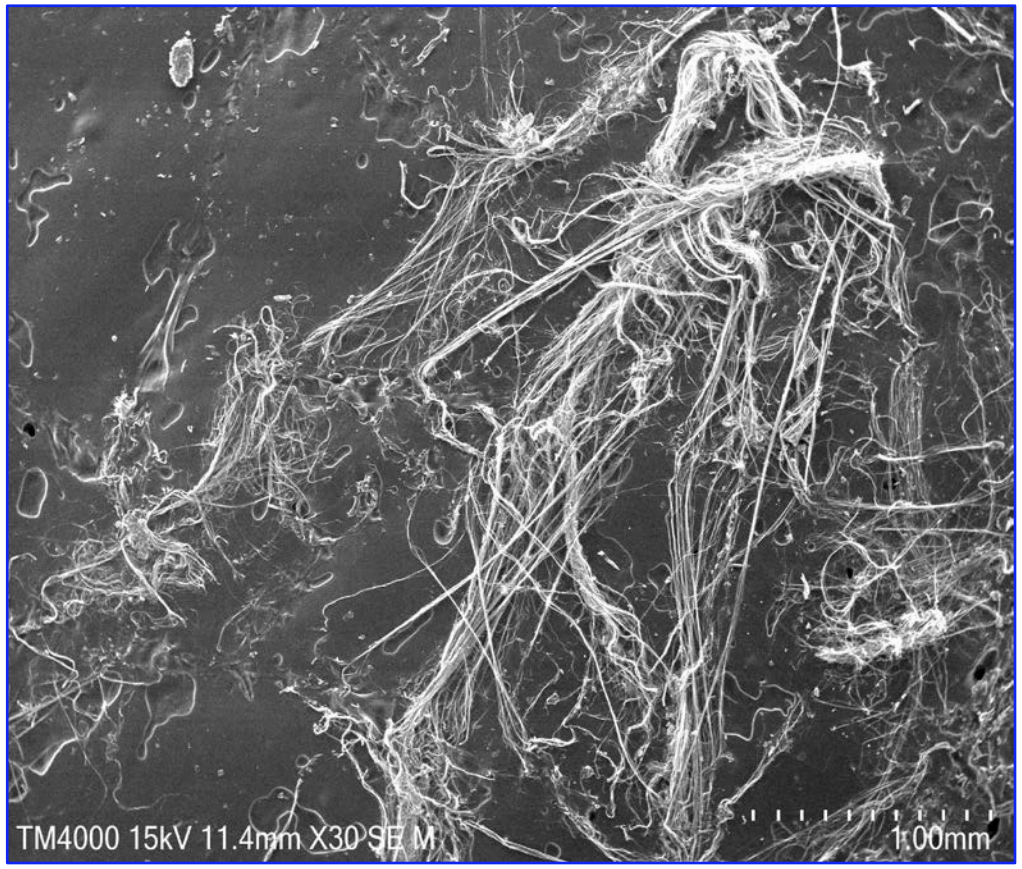


Fig 13a: Section of thread 3-47 with 30x magnification

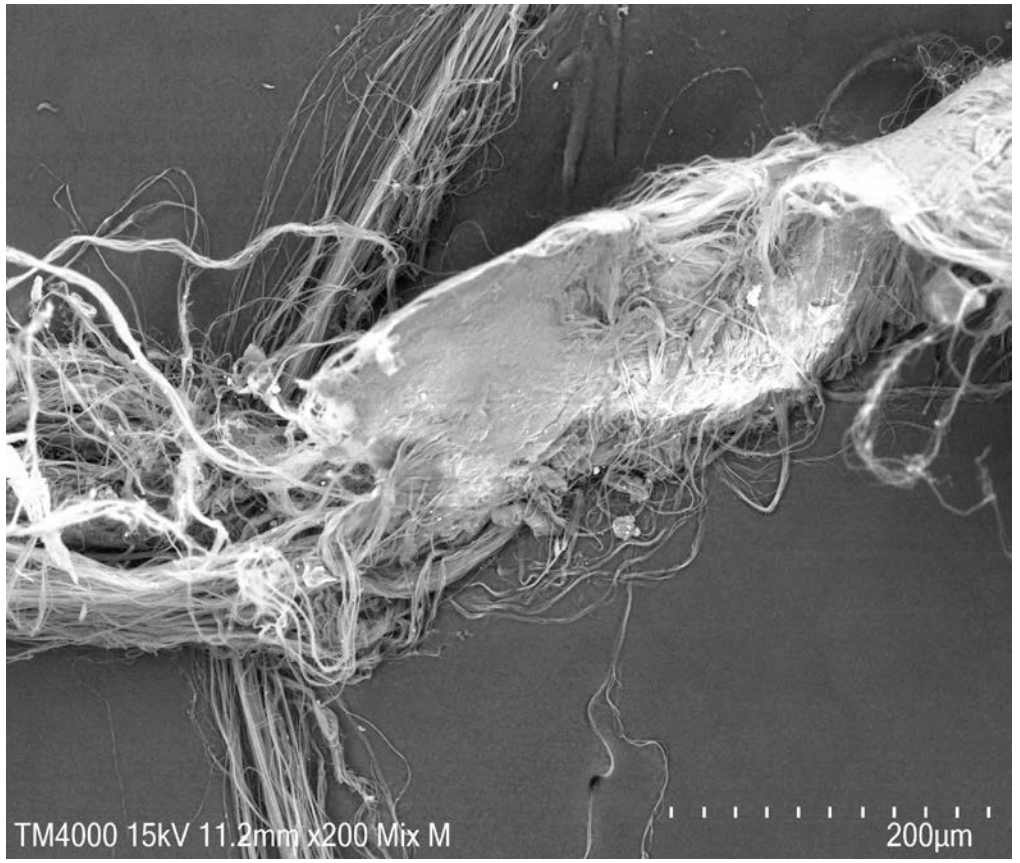
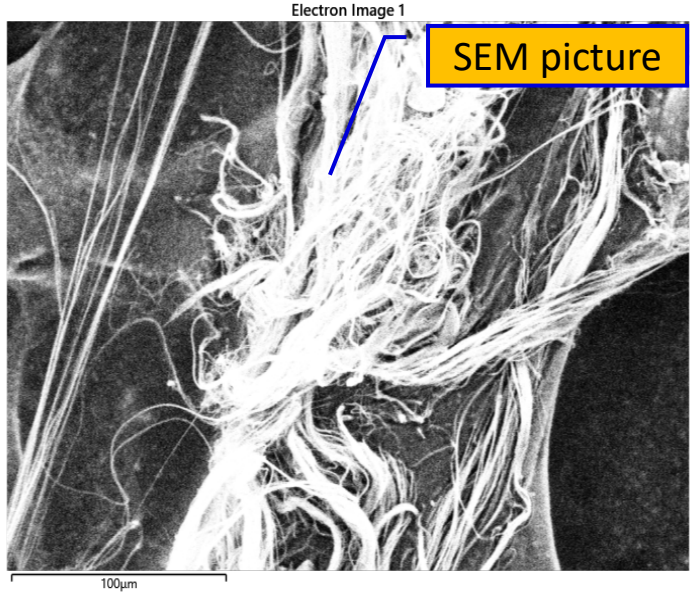
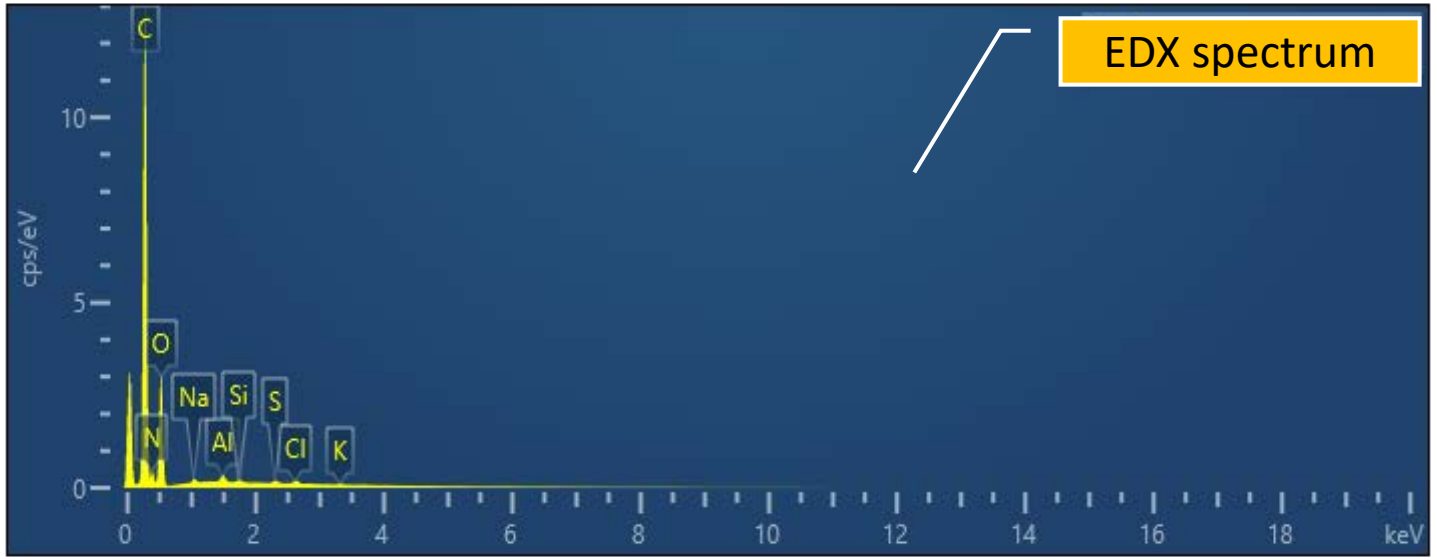


Fig 13b Section of thread 3-47 with 200x magnification

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Scanning Electron Microscopy + Energy-dispersive X-ray Spectroscopy *(SEM-EDX)*





Map Sum SpecRTum			EDX results	
Element	Line Type	Weight %	Weight % Sigma	Atomic %
C	K series	63.72	0.21	69.37
N	K series	10.92	0.26	10.19
O	K series	24.56	0.12	20.07
Na	K series	0.19	0.01	0.11
Al	K series	0.23	0.01	0.11
Si	K series	0.07	0.01	0.03
S	K series	0.10	0.01	0.04
Cl	K series	0.16	0.01	0.06
K	K series	0.05	0.01	0.02
Total		100.00		100.00

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

SEM with embedded threads ex Riedtwil, prepared by slicing with Rotary Microtome device and Diamond cutter

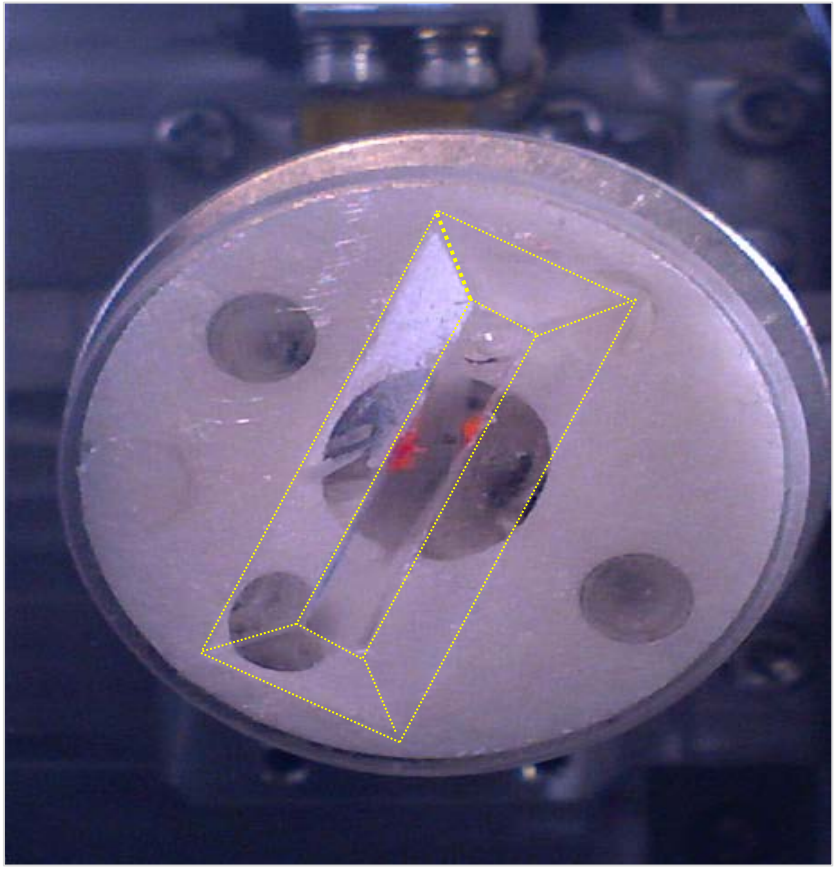


Fig 14a: Embedding of thread Riedtwil (*sample preparation 1*) with specimen holder after cutting with microtomy device. Image shows finished specimen in the SEM specimen chamber. Measurements are taken on the planar surface of the prism (*yellow rectangle*) => cross-sections at various measuring positions highlighted with red marker pen

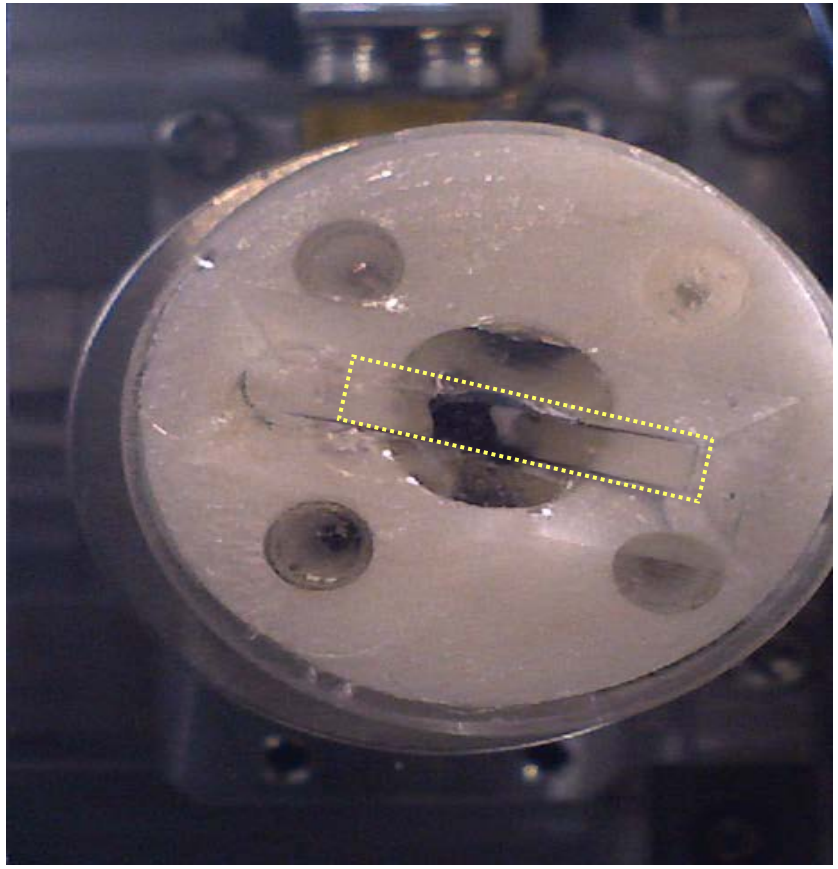


Fig 14b: same as *Fig 14a,* Embedding of thread Riedtwil (*sample preparation 2)* after cutting; black marker pen

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

SEM with embedded threads ex Riedtwil, by slicing with Rotary Microtome device

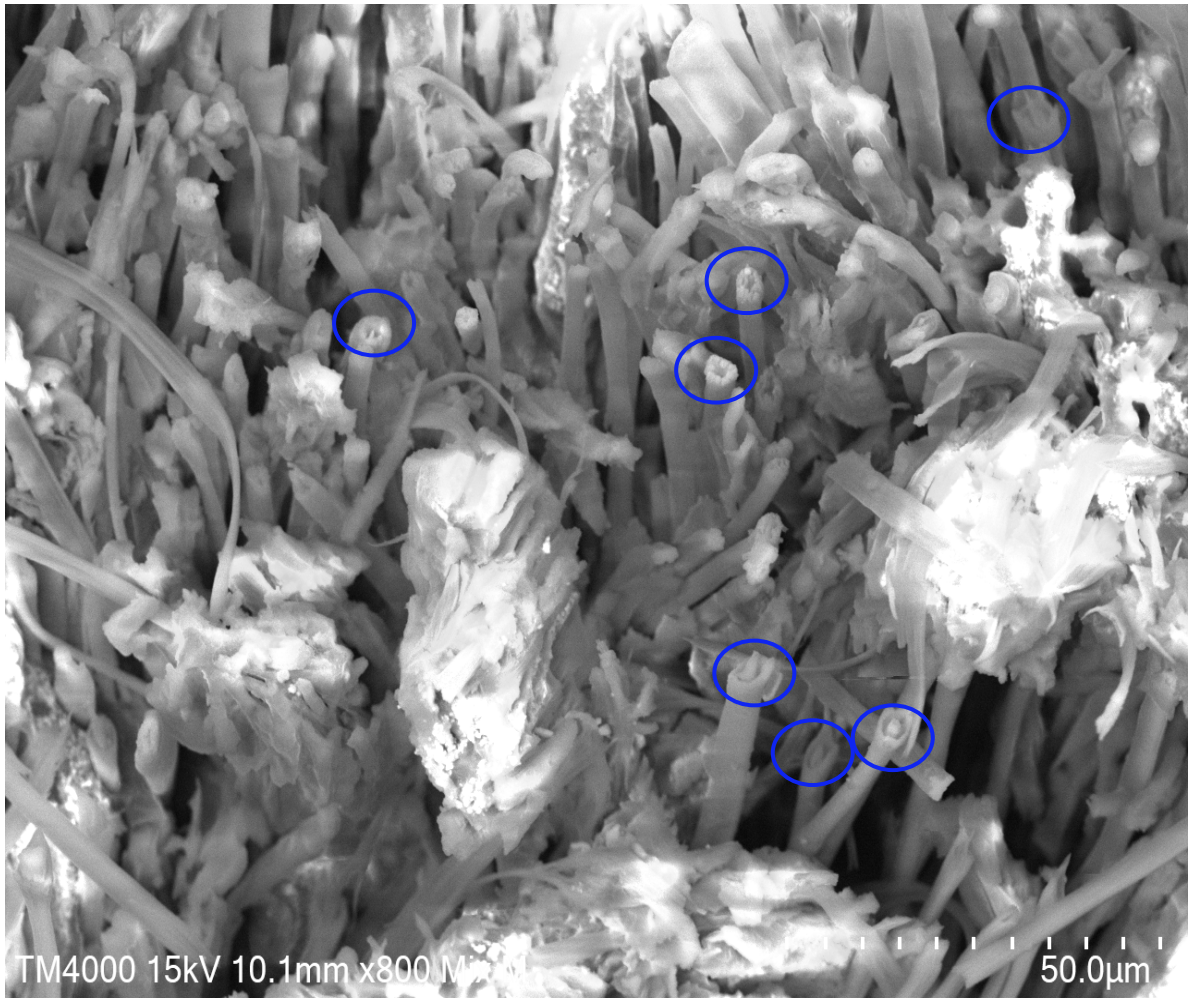


Fig 15a: Section of threads Riedtwil (*measurement position 1*) with 800x magnification. Clearly visible are hollow fibers and suspected ingredients in the cavity (*see blue circles*)

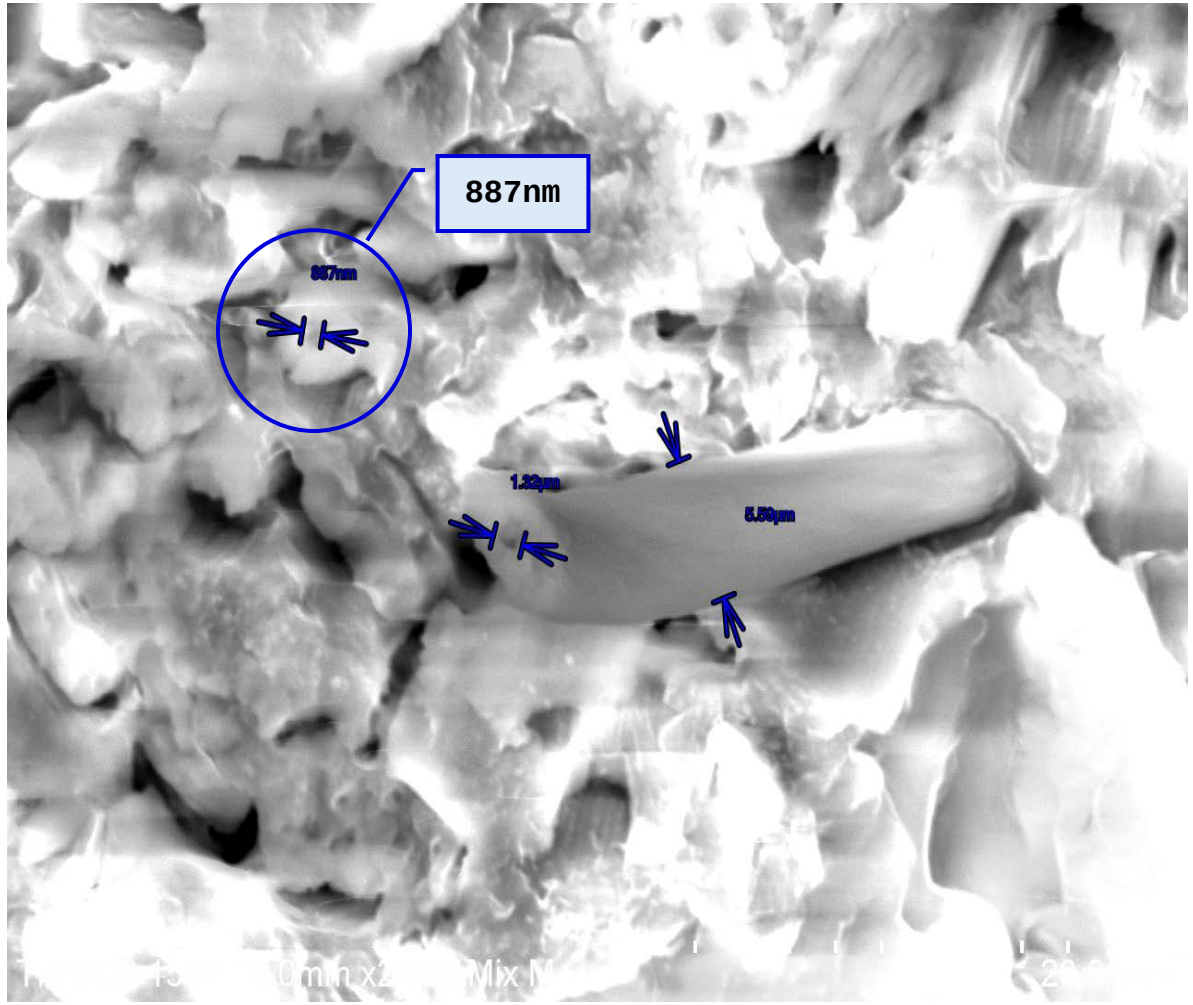


Fig 15b: with approximate dimensions of the single fiber, diameter approx. 5.6µm, cavity inside around 900nm to 1.3µm

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

SEM with embedded threads ex Riedtwil, prepared by slicing with Rotary Microtome device

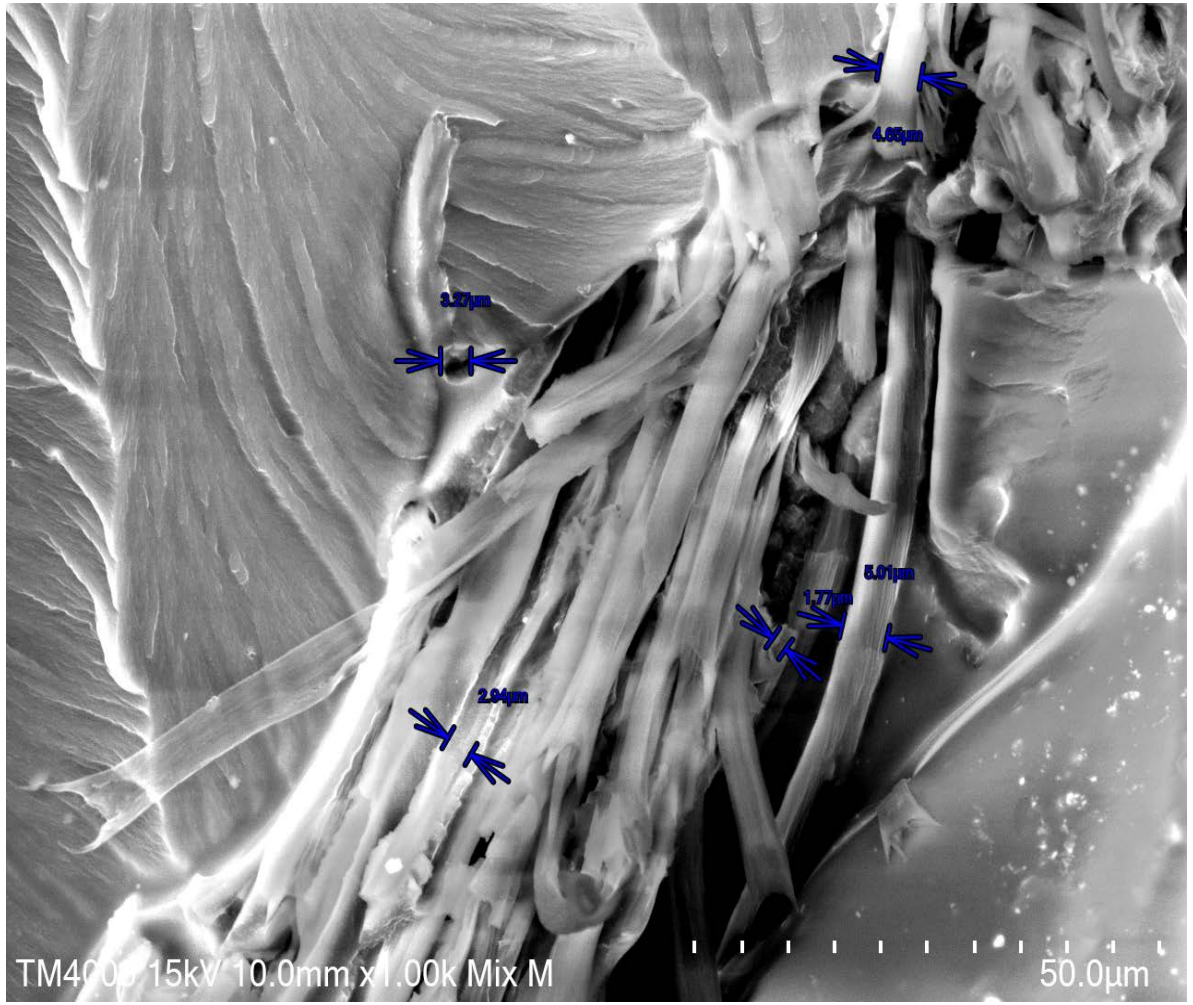


Fig16a: Section of fibers ex Riedtwil (measurement position 3) with 1000x magnification. Approx. diameter of selected filaments between approx. 4.7µm to 5.0µm; cavity approx. 1.8µm to 3.3µm

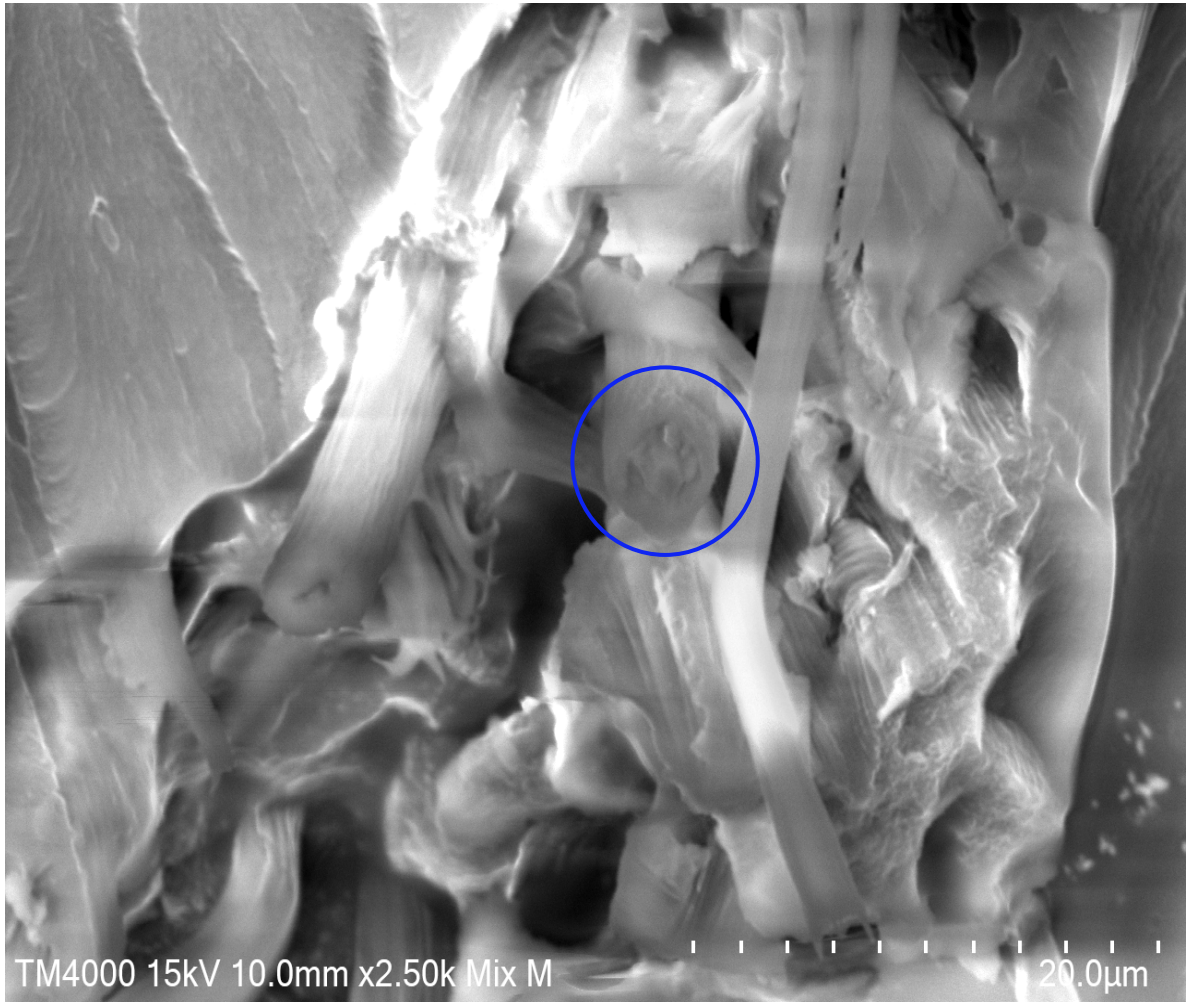


Fig 16b: Section of fibers ex Riedtwil (measuring position 4) with 2500x magnification. The thread shown (see circle) probably contains substances in the cavity

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

SEM with embedded threads ex Riedtwil, prepared by slicing with Rotary Microtome device

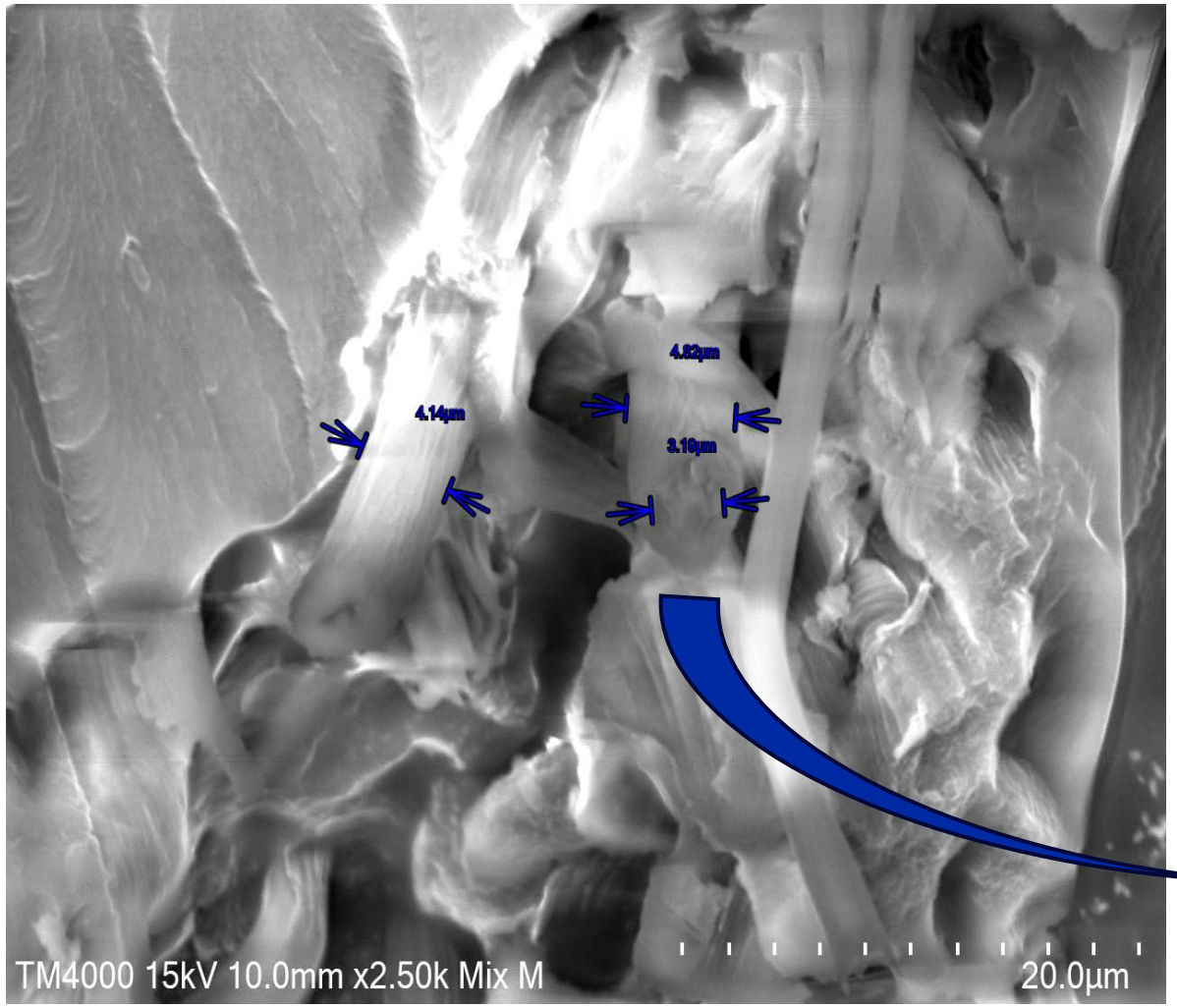


Fig 17a: Section of threads Riedtwil (measuring position 4) with 2500x magnification. Approx. diameter of threads displayed between approx. 4.1µm to 4.8µm; cavity approx. 3.2µm with "content"

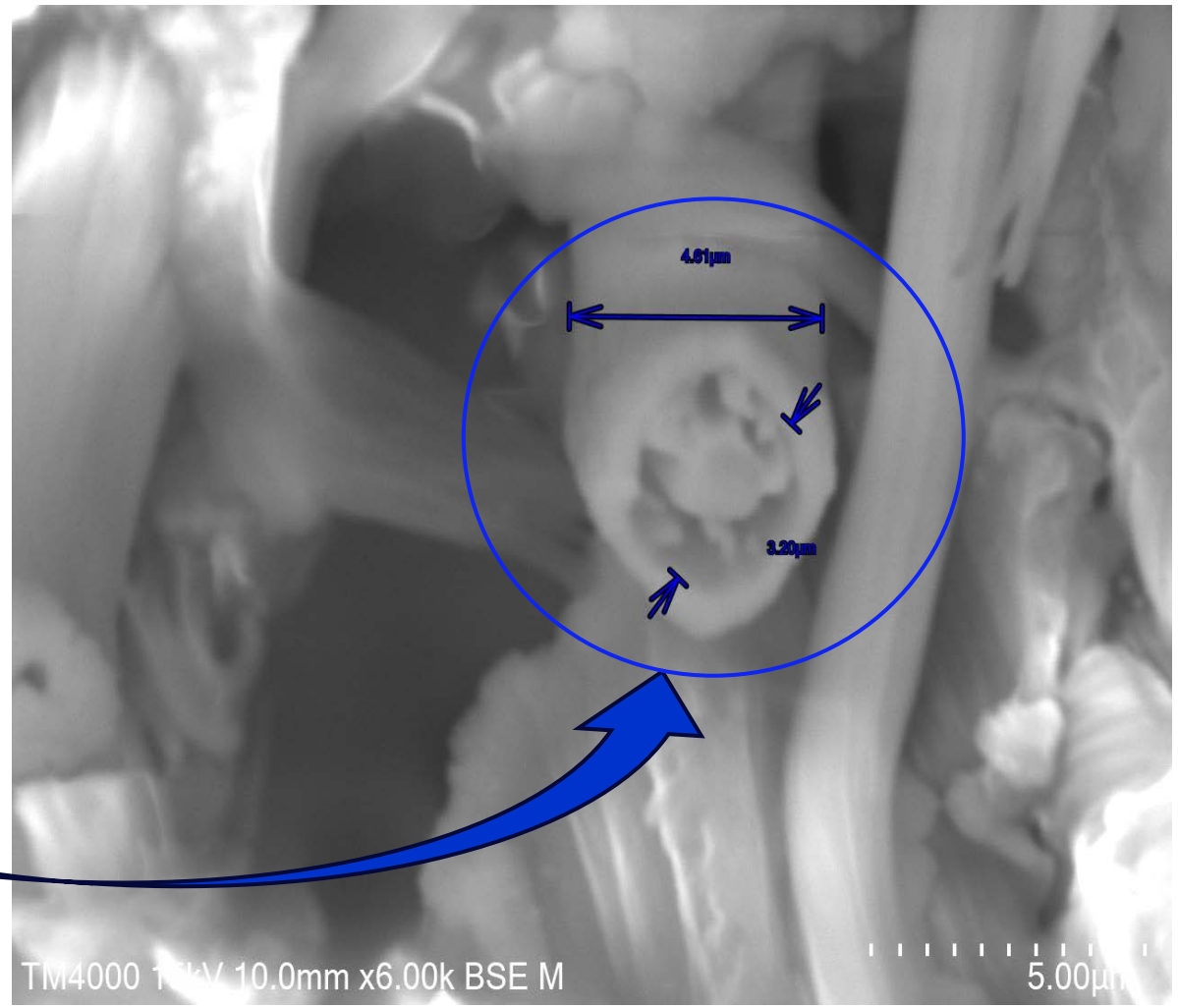


Fig 17b: Section of threads Riedtwil (measuring position 4) with 6000x magnification. Thread (see circle) contains substances in the cavity (most likely)

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Patent EP 1755382 B1

Priority date: May 28th 2004, as DE102004026745, granted on January 30th 2013

DEVICE AND USE THEREOF FOR PRODUCING NANOSCALAR POLYMER FIBRES THAT ARE USED AS SUPPORTS FOR AGRICULTURAL ACTIVE INGREDIENTS

Further members of that patent family: **US 8017061B2** *Sep. 13th 2011* | **US 8431064B2** *April 30th 2013*

Method for the application of nanoscaled polymer (or polylactide) fibres and tubes or hollow fibres as carriers for agriculturally applicable active agents wherein the application occurs using the method of electrospinning, wherein the arable land and/or plants or seeds existing thereon are used as a counter electrode.

The active agent is blended or mixed with the polymer to be electrospun or a second electrospinning method is implemented for the production of the first envelopment or coating in parallel to the electrospinning method implemented for the production of this core fiber, for the purpose of enveloping or coating a first or further core fiber.

The nanoscaled fibres are nanoscaled polymer fibres, polymer tubes or nanoscaled hollow fibres with or without nanoscaled morphologies, which serve as carriers for the agriculturally applicable active agents, wherein the fibres or tubes comprise a diameter of 10 nm to 6 um (or even 50 um) and are biodegradable.

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Patent EP 1755382 B1

Priority date: May 28th 2004, as DE102004026745, granted on January 30th 2013

DEVICE AND USE THEREOF FOR PRODUCING NANOSCALAR POLYMER FIBRES THAT ARE USED AS SUPPORTS FOR AGRICULTURAL ACTIVE INGREDIENTS

Further members of that patent family: **US 8017061B2** *Sep. 13th 2011* | **US 8431064B2** *April 30th 2013*

Method for the application of nanoscaled polymer (or polylactide) fibres and tubes or hollow fibres as carriers for agriculturally applicable active agents wherein the application occurs using the method of electrospinning, wherein the arable land and/or plants or seeds existing thereon are used as a counter electrode.

Examples are the long-standing methods of application or distribution, with watering can, hand syringe, backpack sprayer, tractor, helicopter and aircraft.

Surprisingly, in tests, it has also been possible to "spy" other similarly hydrous biological systems, such as the limbs (hands, feet, arms, legs) or other central body parts of humans or animals in a relatively targeted manner.

This is attributed to the good inducibility of electrical polarization of the water in these biological systems.

Overall, it was also found that generally dielectric substances or even ferroelectric Crystals are excellently suited as target surfaces for the electrospinning of polymer solutions or/and melts.

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Patent EP 1200653 B1

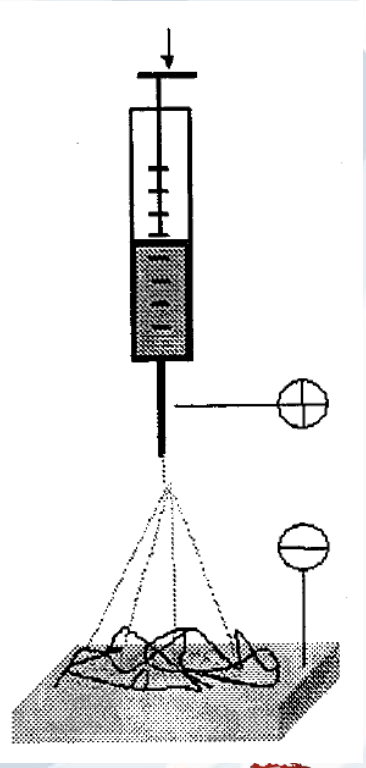
Priority date: July 29th 1999, as DE19935388, granted on July 30th 2008

MESOTUBES AND NANOTUBES

The invention relates to mesotubes and nanotubes or hollow fibers with an inner diameter in the nanometer to micrometer range, and a method for producing these hollow fibers.

Hollow fibers, mesotubes or nanotubes are generally called tubes with an inner diameter of less than 0.1 mm

This Patent was a predexessor and state of the art to EP 175583 B1
The inventors are partly the same. They are material scientists and have, according to our understanding, nothing to do with potential large field tests that may have led to the occurring of all these silk strands.



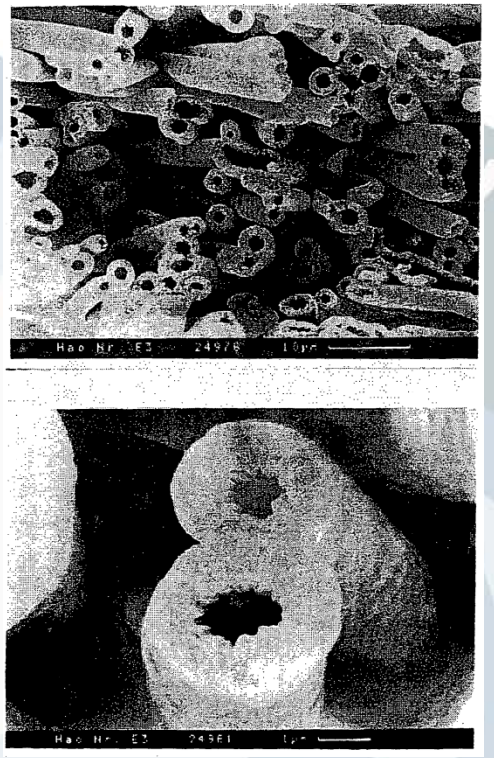
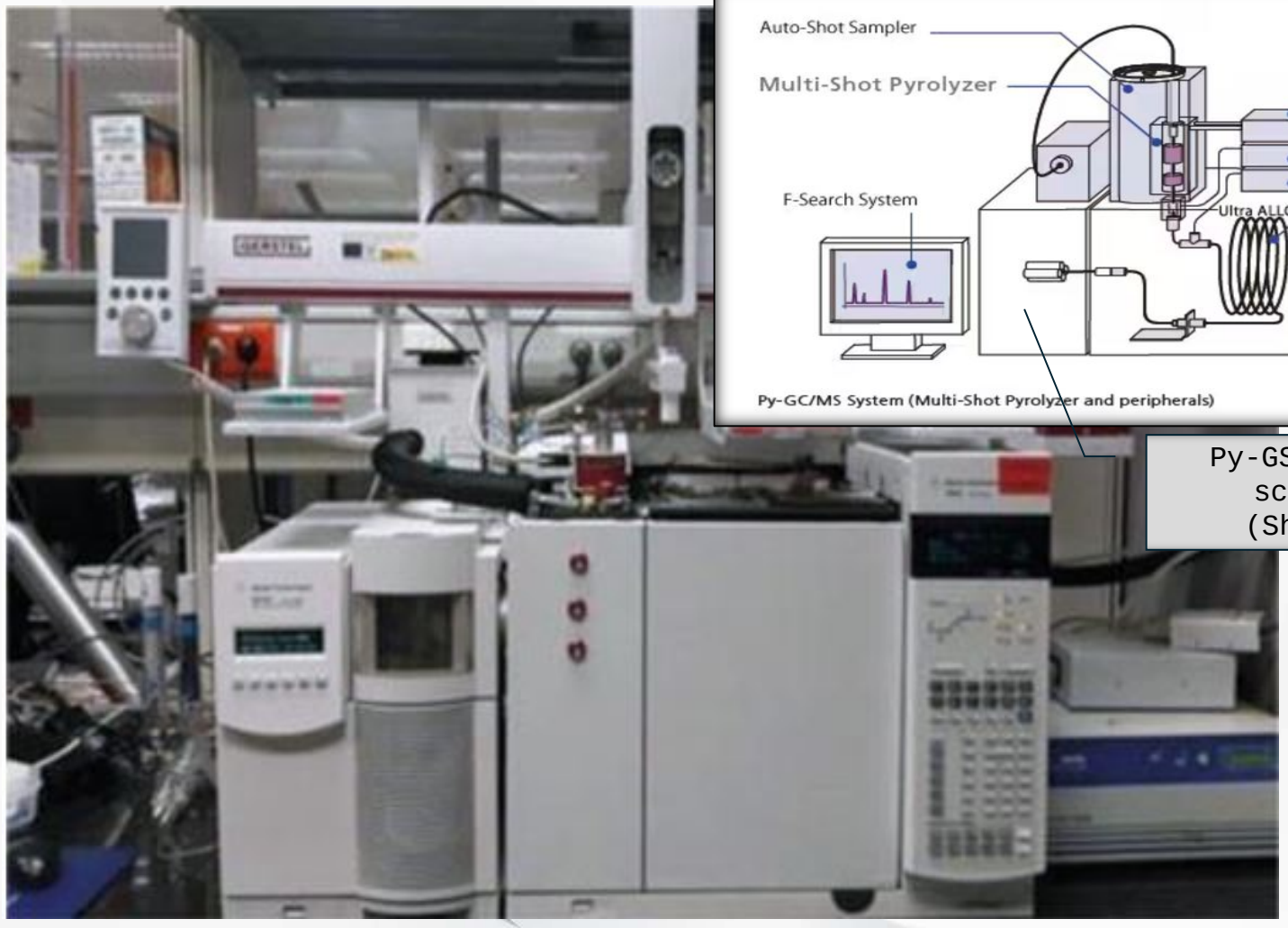


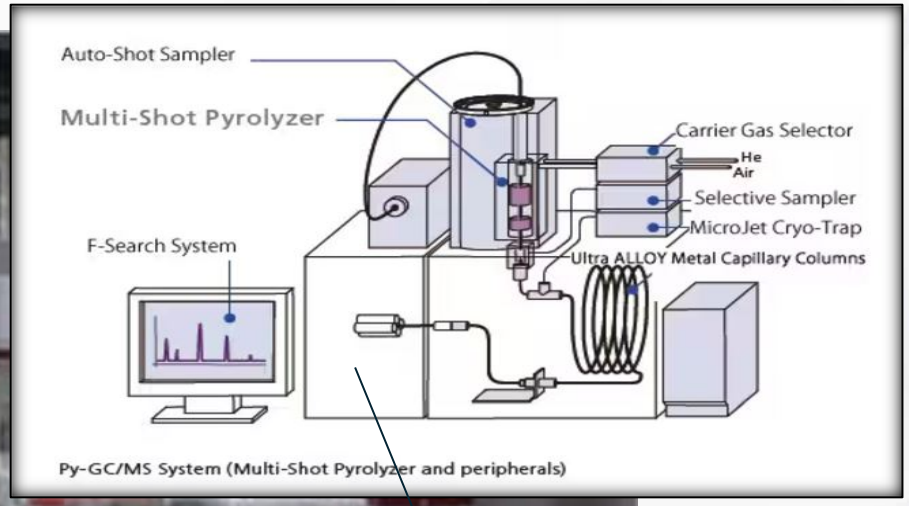
Fig. 1. (left) schematic representation of an electrospinning apparatus

Fig. 7 (right) scanning electron micrographs of poly (p-xylylene) hollow fibers after removal of the polylactide template fibers

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Pyrolysis Gas Chromatography - Mass Spectrometry (Py-GCMS)





Py-GSMS system schematic (Shimadzu)

GCMS with MultiPurpose sampler, thermal desorption unit, pyrolysis module (Gerstel)

Gas chromatography with mass spectrometry coupling:

- ***Gas chromatography with mass spectrometry coupling is an analytical chemistry method for identifying and quantifying organic compounds***
- *In **analytical pyrolysis,** molecular chains of e.g. **polymers are broken up into fragments** by very rapidly heating to a high temperature e.g. 600°C.*
- *The **fragments of the polymer is investigated by introducing** the smaller molecules (pyrolyzates) **into a GCMS***

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Pyrolysis Gas Chromatography - Mass Spectrometry, thread 3-47

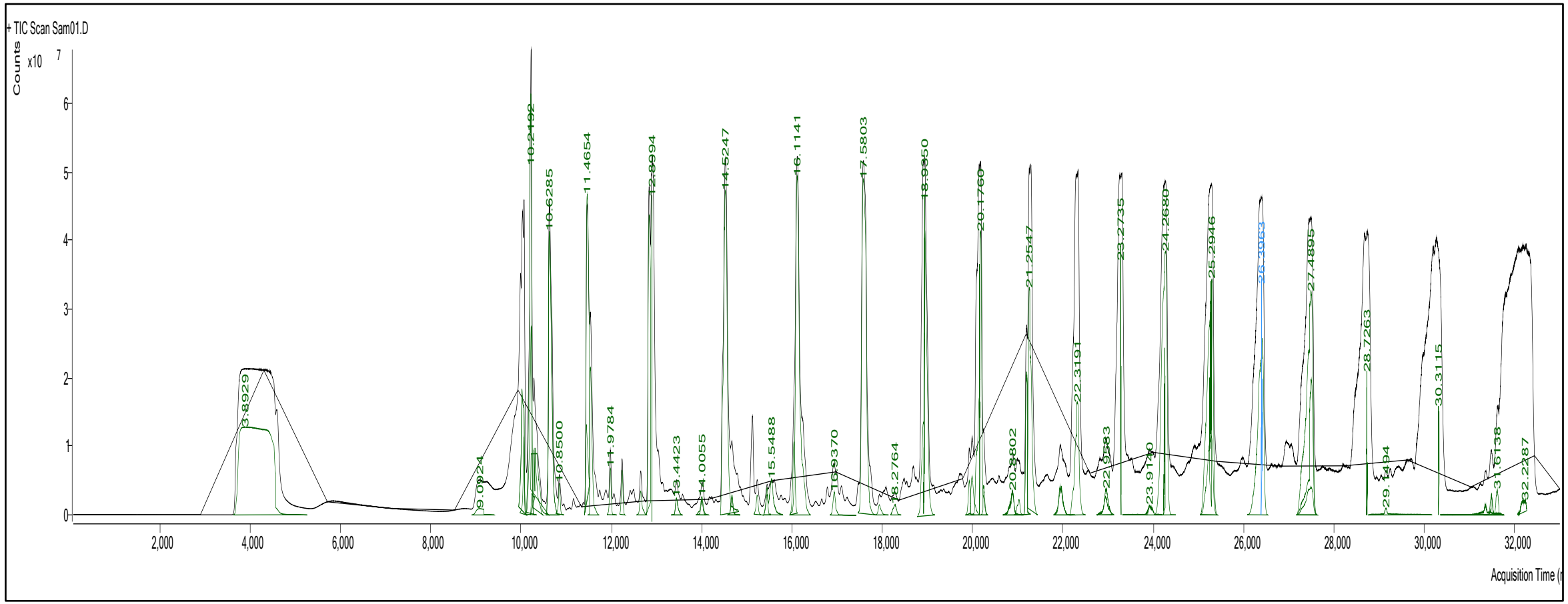
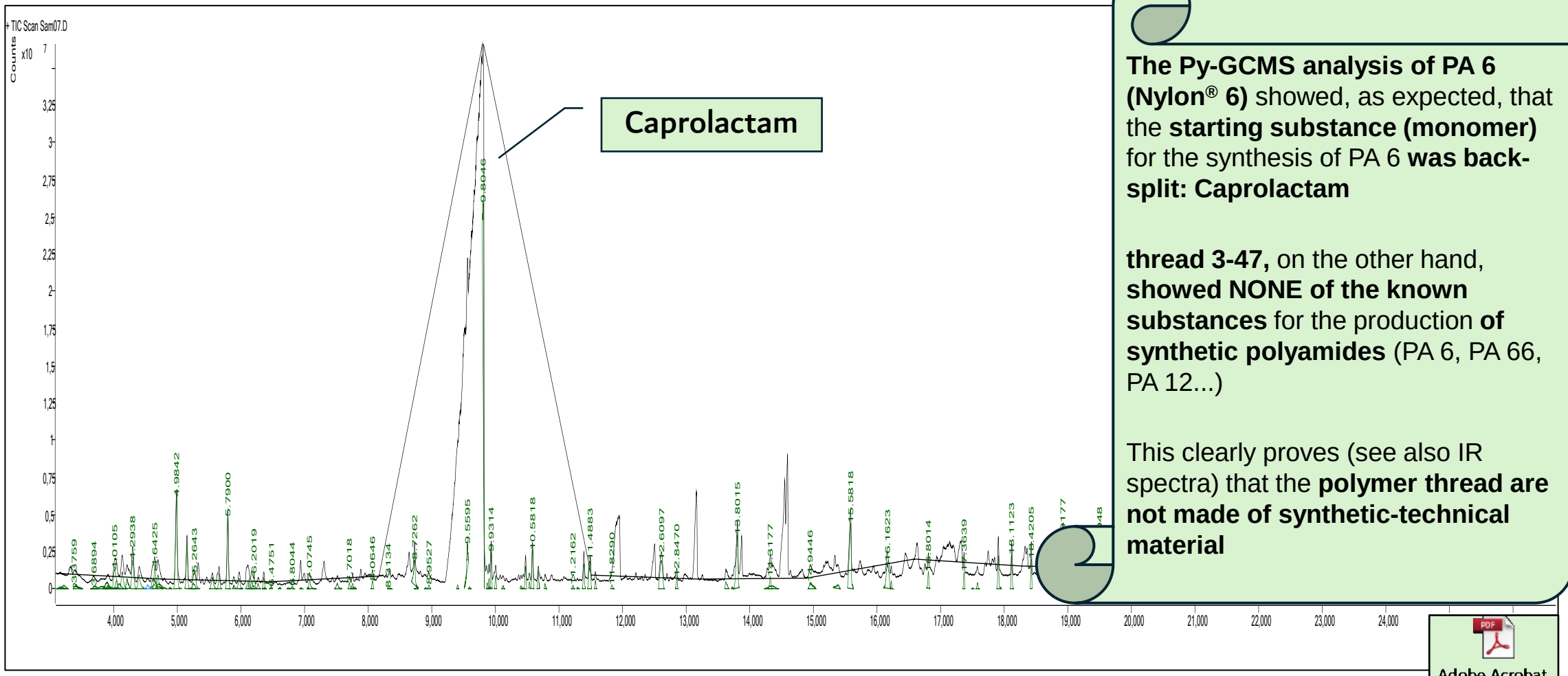


Fig 17: Pyrolyse-GCMS-Trace of thread 3-47

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Pyrolysis Gas Chromatography - Mass Spectrometry, sample PA 6 (Nylon® 6)



The Py-GCMS analysis of PA 6 (Nylon® 6) showed, as expected, that the **starting substance (monomer)** for the synthesis of PA 6 **was back-split: Caprolactam**

thread 3-47, on the other hand, **showed NONE of the known substances** for the production **of synthetic polyamides** (PA 6, PA 66, PA 12...)

This clearly proves (see also IR spectra) that the **polymer thread are not made of synthetic-technical material**

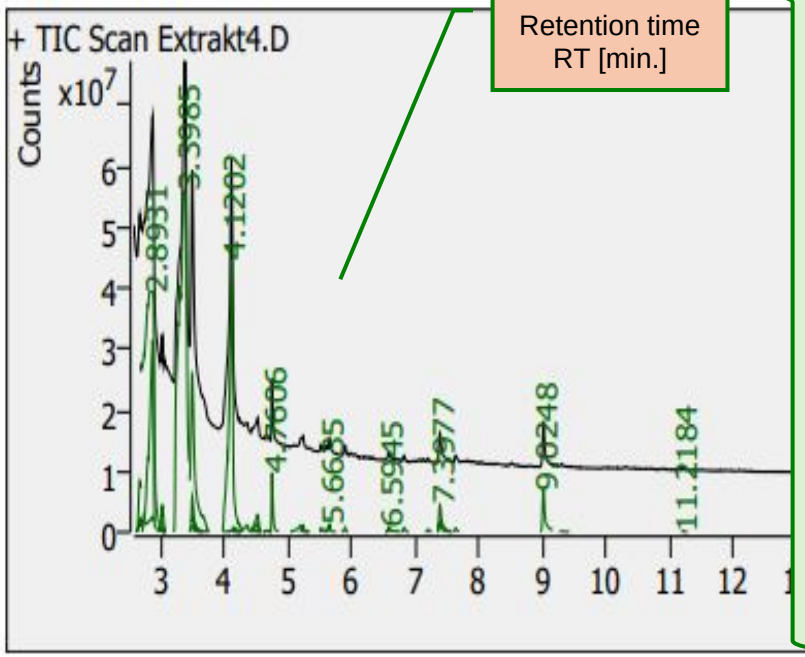
Adobe Acrobat Document

Fig 18: Pyrolyse-GCMS-Trace of the synthetic (technical) Polyamid PA 6 (Nylon® 6)

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

GCMS Trace

Analysis File Name	Faserextrtakt Nano.uaf
Analyst Name	
Analysis Time	3/27/2024 1:27:01 PM
Data File Name	Extrakt4.D
Sample Name	Extrakt4
Acq Method File	Faserextrakt
Acq Time	3/26/2024 12:52:22 PM
Instrument Name	Intuvo_MSD



Retention time
RT [min.]

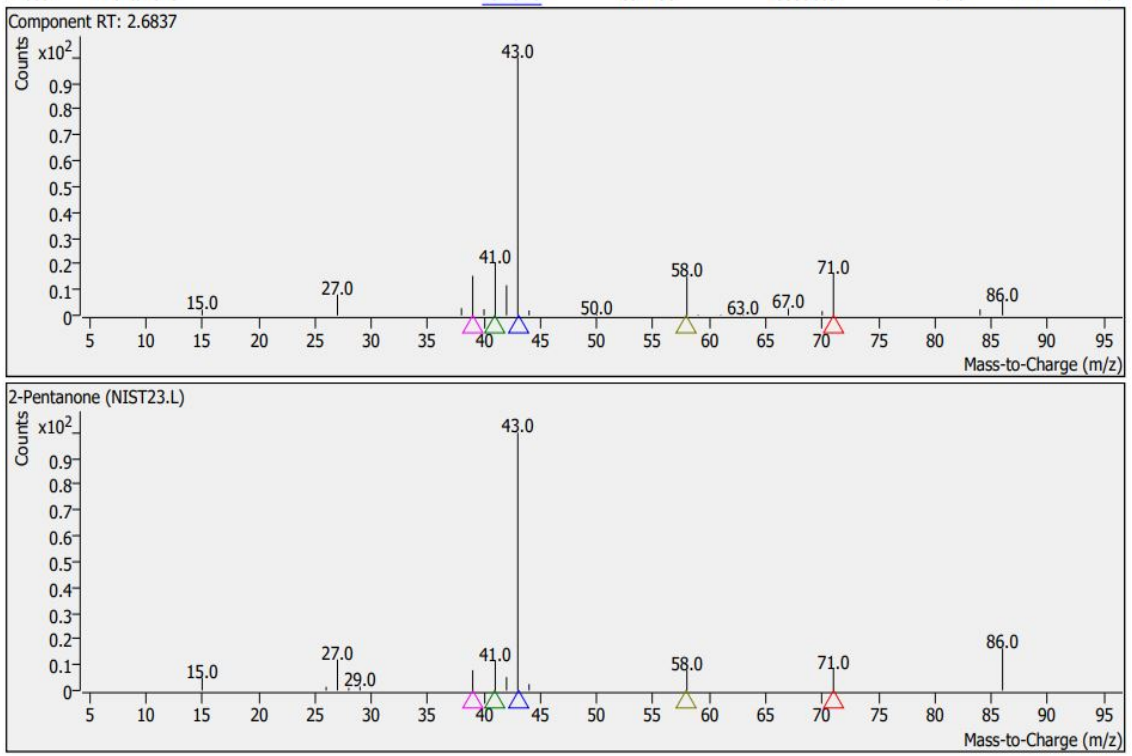
RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
2.6837	2-Pentanone	107-87-9	C5H10O	19999669		86.6	1.21	4.02
2.6868	Urea, 1-methylcyclopropyl-	58102-14-0	C5H10N2O	6766861		54.5	0.41	1.36
2.7521	2-Propenoic acid, oxiranylmethyl ester	106-90-1	C6H8O3	8001717		63.5	0.49	1.61
2.8842	(Z)-CH3CH2CH=CH(OCH3)	10034-12-5	C5H10O	149191988		74.0	9.05	30.02
2.8879	Oxetane, 3-(1-methylethyl)-	10317-17-6	C6H12O	18991705		57.1	1.15	3.82
2.8931	2,3-Hexanedione	3848-24-6	C6H10O2	461289190		83.7	27.97	92.80
3.0344	2(3H)-Furanone, dihydro-3,5-dimethyl-	5145-01-7	C6H10O2	9524980		86.2	0.58	1.92
3.0590	Carbamic acid, monoammonium salt	1111-78-0	CH6N2O2	1361870		61.4	0.08	0.27
3.3985	Ethanone, 1-cyclopropyl-	765-43-5	C5H8O	497053902		84.9	30.14	100.00
3.5048	Propyl pyruvate	1000431-41-8	C6H10O3	129180976		87.8	7.83	25.99
3.5078	Dimethyl ether	115-10-6	C2H6O	17315014		66.8	1.05	3.48
3.5186	Furan, 2-methoxy-	25414-22-6	C5H6O2	8759503		82.7	0.53	1.76
3.5203	Methanesulfinyl fluoride, trifluoro-	812-12-4	CF4OS	5273045		50.5	0.32	1.06
3.5229	Ethane, 1,1,1-trifluoro-	420-46-2	C2H3F3	1837998		52.1	0.11	0.37
4.1202	2-Pentene, 2,3-dimethyl-	10574-37-5	C7H14	199000520		89.9	12.07	40.04
4.1315	Histamine, N-benzoyl-2-cyano-	74419-68-4	C13H12N4O	1211450		53.5	0.07	0.24
4.1359	1-Pentanone, 1-(2-furanyl)-	3194-17-0	C9H12O2	1019647		59.8	0.06	0.21
4.1580	Water	7732-18-5	H2O	2504771		86.3	0.15	0.50
4.3670	1,5-Dimethyl-1,4-cyclohexadiene	4190-06-1	C8H12	4562178		82.0	0.28	0.92
4.5248	Butanenitrile, 4-(dimethylamino)-	13989-82-7	C6H12N2	161984		61.1	0.01	0.03
4.5320	Cyclohexene, 3,5-dimethyl-	823-17-6	C8H14	12650158		90.8	0.77	2.55
4.5359	Cyclohexene, 4-methyl-	591-47-9	C7H12	6098132		60.2	0.37	1.23
4.5402	N-Benzyloxycarbonyloxy-5-norbornene-2,3-dicarboximide	62210-73-5	C17H15NO5	1328603		50.8	0.08	0.27
4.6697	2-Pentyn-4-one	7299-55-0	C5H6O	637750		68.5	0.04	0.13
4.7036	1,3-Cyclohexadiene, 5,6-dimethyl-	5715-27-5	C8H12	769153		70.8	0.05	0.15
4.7606	Acetone	67-64-1	C3H6O	15824489		95.0	0.96	3.18
5.2109	Benzene, 1,3-dimethyl-	108-38-3	C8H10	4990927		92.9	0.30	1.00
5.2484	(R)-(+)-3-Methylcyclopentanone	6672-30-6	C6H10O	2481356		70.1	0.15	0.50

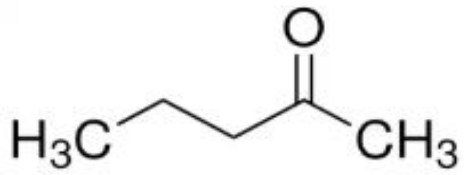
RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
5.5308	(R)-(+)-3-Methylcyclopentanone	6672-30-6	C6H10O	1212191		74.2	0.07	0.24
5.6017	(Z)-3-Heptene	7642-10-6	C7H14	922767		67.0	0.06	0.19
5.6635	Furan, 3-methyl-	930-27-8	C5H6O	2619124		81.2	0.16	0.53
5.9075	1H-Pyrazole, 4,5-dihydro-3-methyl-1-propyl-	26964-49-8	C7H14N2	1382050		75.0	0.08	0.28
6.5887	2-Methylthiolane, S,S-dioxide	1003-46-9	C5H10O2S	617212		73.0	0.04	0.12
6.5945	Cycloheptene	628-92-2	C7H12	3017986		73.2	0.18	0.61
6.8338	Benzene, 1,2,4-trimethyl-	95-63-6	C9H12	1466138		86.2	0.09	0.29
7.2078	N-Methyl methacrylamide	3887-02-3	C5H9NO	794861		68.5	0.05	0.16
7.3954	Ethylbenzene	100-41-4	C8H10	6184923		64.5	0.38	1.24
7.3977	1,3-Hexadiene, 2,5-dimethyl-	29253-64-3	C8H14	14077119		83.6	0.85	2.83
7.4000	1,3,7-Octatriene	1002-35-3	C8H12	4836937		59.8	0.29	0.97
7.5377	1H-Pyrazole-1-carboximidamide, 3,5-dimethyl-	22906-75-8	C6H10N4	475370		64.0	0.03	0.10
7.6467	Cyclohexene, 1,6-dimethyl-	1759-64-4	C8H14	1424397		68.5	0.09	0.29
9.0248	Ethinamate	126-52-3	C9H13NO2	20018408		80.3	1.21	4.03
9.3111	Ethane, 1,2-dibromo-	106-93-4	C2H4Br2	199199		54.3	0.01	0.04
11.2184	Benzene, 1-ethyl-3,5-dimethyl-	934-74-7	C10H14	253850		68.0	0.02	0.05
23.3546	4-Octene, (E)-	14850-23-8	C8H16	1729434		80.7	0.10	0.35

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

2-Pentanone, CAS 107-87-9 / RT: 2.6837 [≈ 1.2 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
2.6837	2-Pentanone	107-87-9	C5H10O	19999669		86.6	1.21	4.02





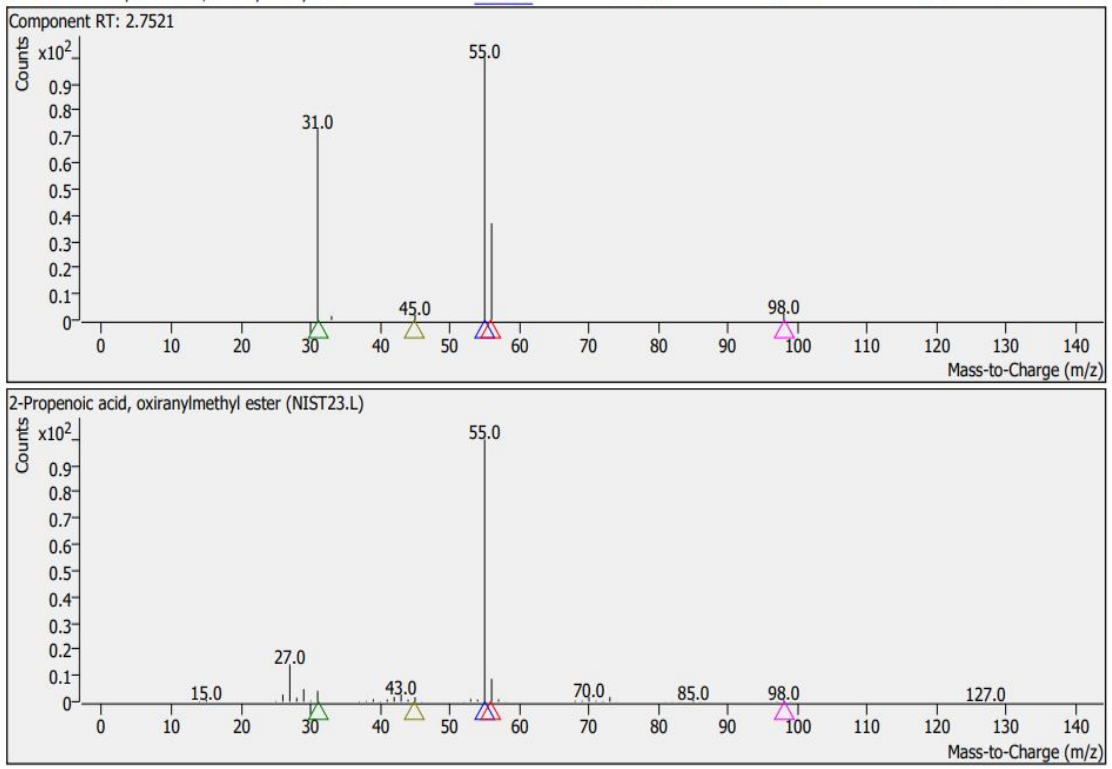
2-Pentanone **Revision Date** 24-Dec-2021

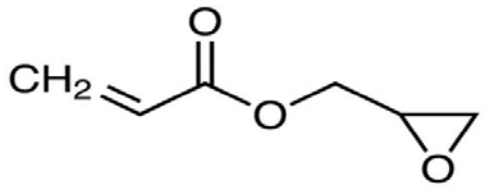
Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear protective gloves/protective clothing/eye protection/face protection
Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Fire
In case of fire: Use CO_2, dry chemical, or foam for extinction
Storage
Store in a well-ventilated place. Keep cool
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
None identified

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

2-Propenoic acid, oxyranylmethyl ester, CAS 106-90-1 / RT: 2.7521 [≈ 0.5 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
2.7521	2-Propenoic acid, oxiranylmethyl ester	106-90-1	C6H8O3	8001717		63.5	0.49	1.61





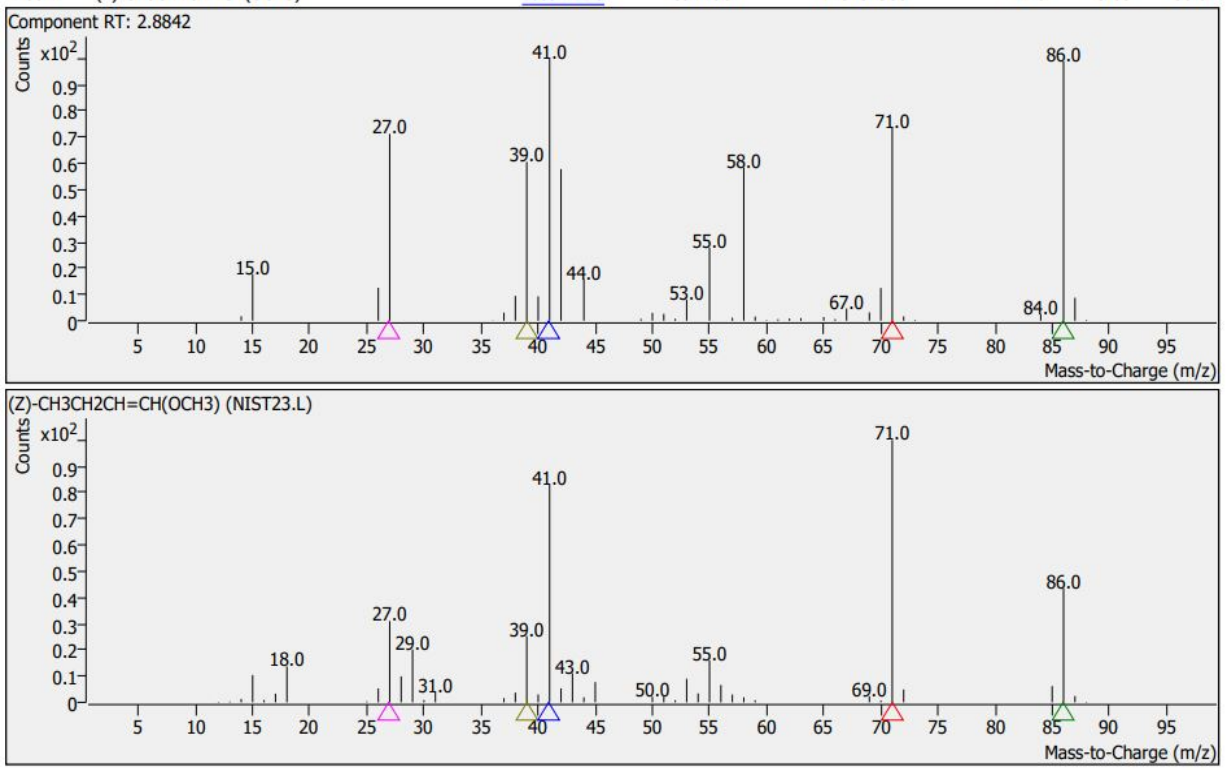
Danger
H301 Toxic if swallowed
H311 Toxic in contact with skin
H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin reaction
H331 Toxic if inhaled

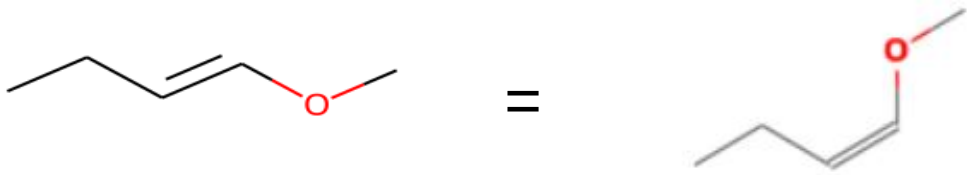
P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P271 Use only outdoors or in a well-ventilated area.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P321 Specific treatment (see ... on this label).
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of water/...
P312 Call a POISON CENTER/doctor/...if you feel unwell.
P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P363 Wash contaminated clothing before reuse.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER/doctor/...
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P311 Call a POISON CENTER/doctor/...
P405 Store locked up.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container to ...

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

(Z)-CH3CH2CH=CH(OCH3), CAS 10034-12-5 / RT: 2.8842 [≈ 9.05 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
2.8842	(Z)-CH3CH2CH=CH(OCH3)	10034-12-5	C5H10O	149191988		74.0	9.05	30.02





GHS label elements, including precautionary statements

Pictogram(s)	no data available
Signal word	no data available
Hazard statement(s)	no data available
Precautionary statement(s)	
Prevention	no data available
Response	no data available
Storage	no data available
Disposal	no data available

?

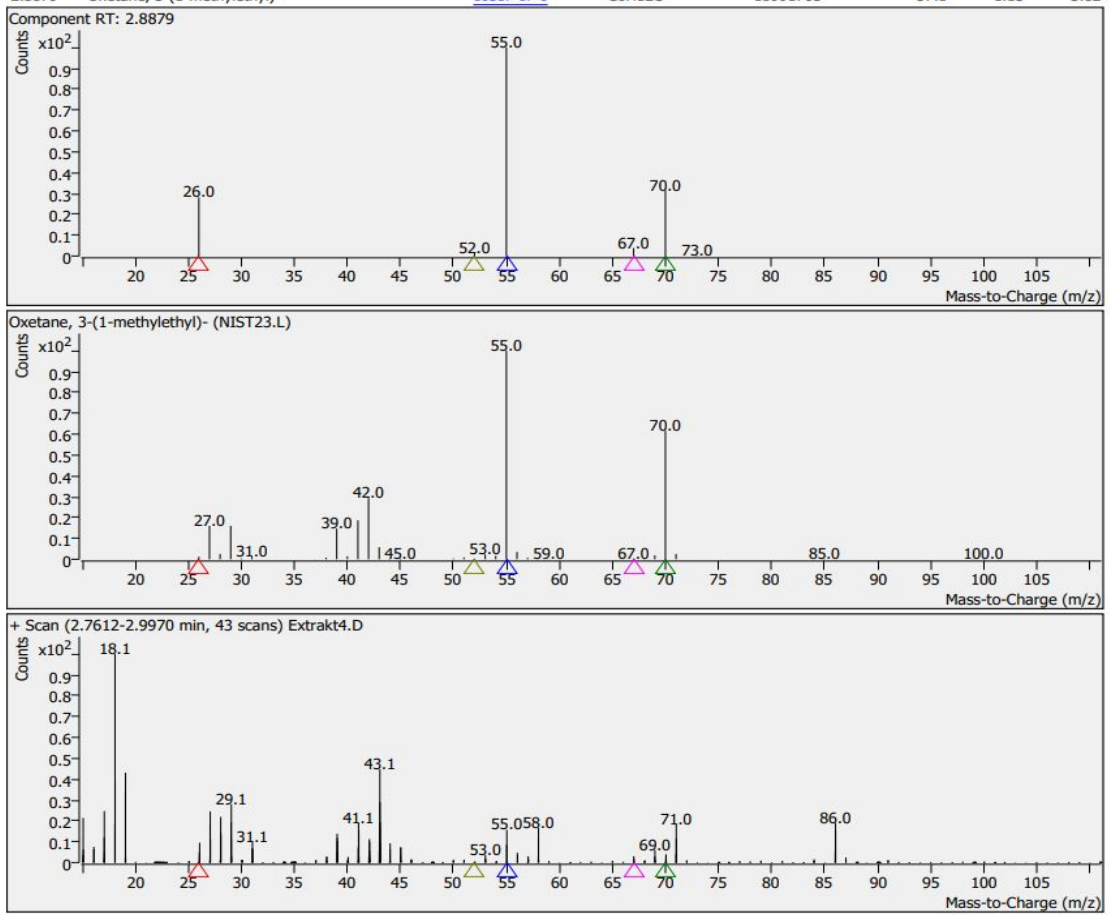
Other hazards which do not result in classification

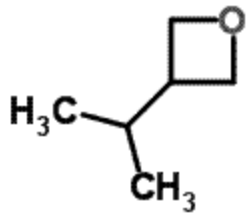
no data available

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Oxetane, 3-(1-methyletyl)-, CAS 10317-17-6 / Peak RT: 2.8879 [≈ 1.15 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
2.8879	Oxetane, 3-(1-methylethyl)-	10317-17-6	C6H12O	18991705		57.1	1.15	3.82





1. Identification

1.1 GHS Product identifier

Product name 3-propan-2-yloxetane

1.2 Other means of identification

Product number -
Other names Oxetane,3-(1-methylethyl)

1.3 Recommended use of the chemical and restrictions on use

Identified uses For industry use only.
Uses advised against no data available

1.4 Supplier's details

Company XiXisys.com
Address XiXisys.com
Telephone XiXisys.com
Fax XiXisys.com

1.5 Emergency phone number

Emergency phone number -
Service hours Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

2. Hazard identification

2.1 Classification of the substance or mixture

no data available

2.2 GHS label elements, including precautionary statements

Pictogram(s) no data available
Signal word no data available
Hazard statement(s) no data available
Precautionary statement(s)
Prevention no data available
Response no data available
Storage no data available
Disposal no data available

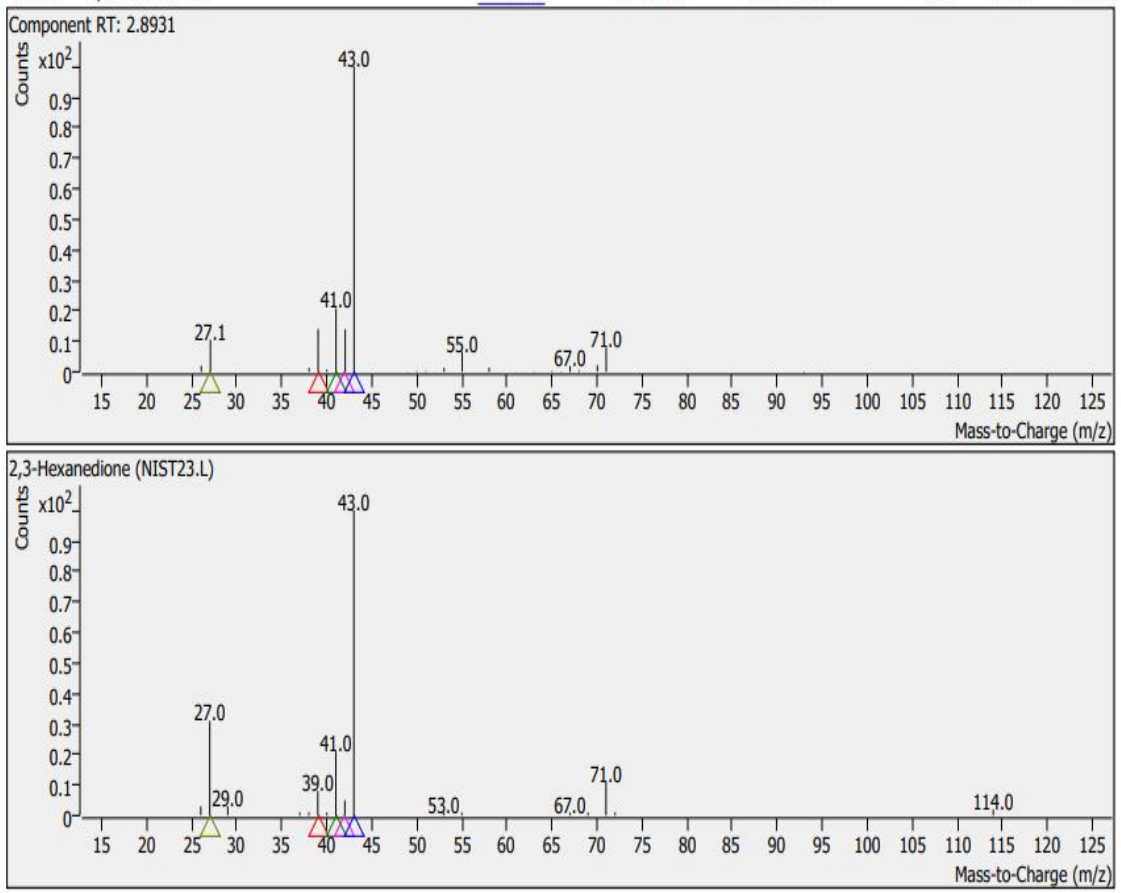
2.3 Other hazards which do not result in classification

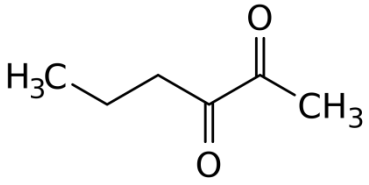
?

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

2,3-Hexadione, CAS 3848-24-6 / RT: 2.8931 [≈ 28.0 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
2.8931	2,3-Hexanedione	3848-24-6	C6H10O2	461289190		83.7	27.97	92.80





1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : 2,3-Hexanedione

Product Number : W255807
Brand : Aldrich

CAS-No. : 3848-24-6

.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

2. HAZARDS IDENTIFICATION

.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 3), H226

For the full text of the H-Statements mentioned in this Section, see Section 16.

.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Warning

Hazard statement(s)

H226	Flammable liquid and vapour.

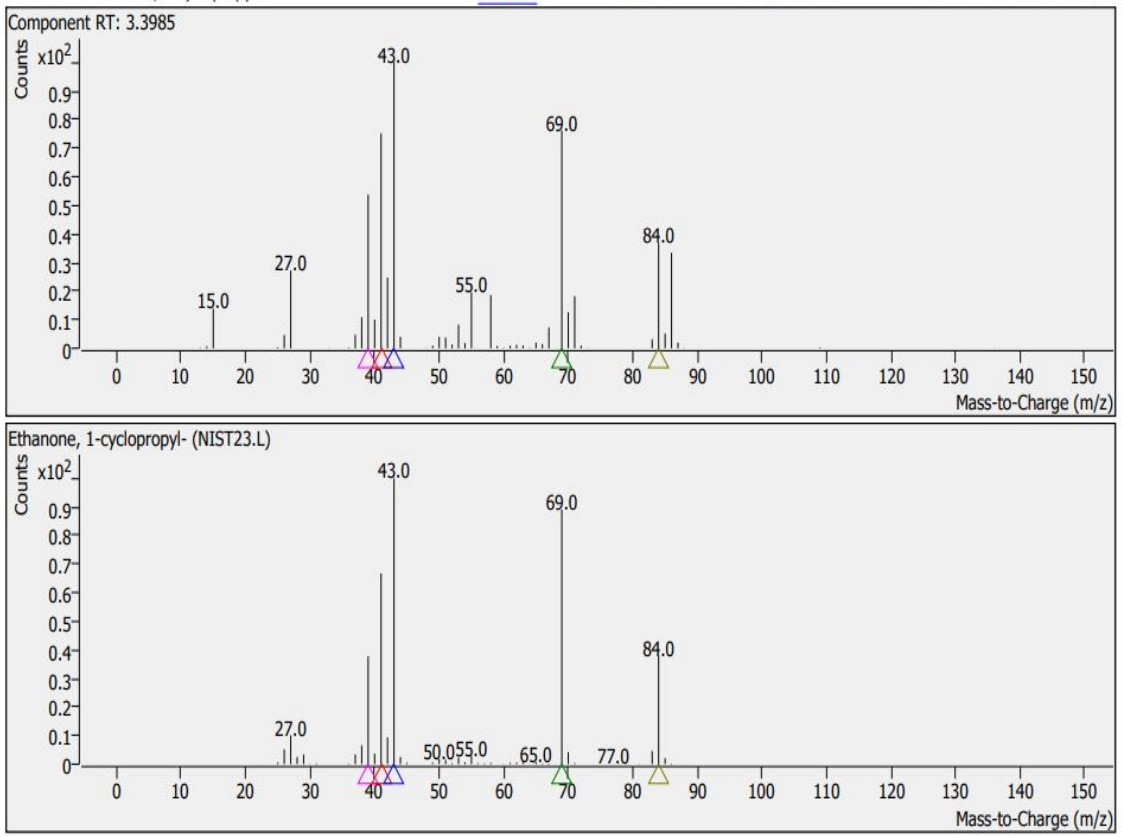
Precautionary statement(s)

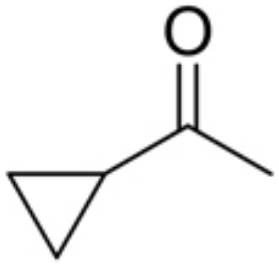
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P235	Store in a well-ventilated place. Keep cool.

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Ethanone, 1-cyclopropyl, CAS 765-43-5 / RT: 3.3985 [≈ 30.1 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
3.3985	Ethanone, 1-cyclopropyl-	765-43-5	C5H8O	497053902		84.9	30.14	100.00





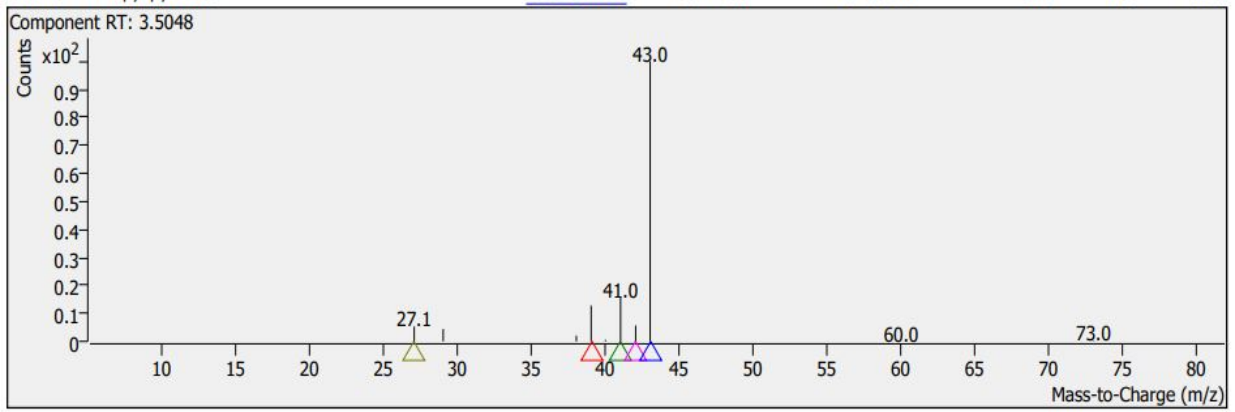
Cyclopropyl methyl ketone **Revision Date** 24-Dec-2021

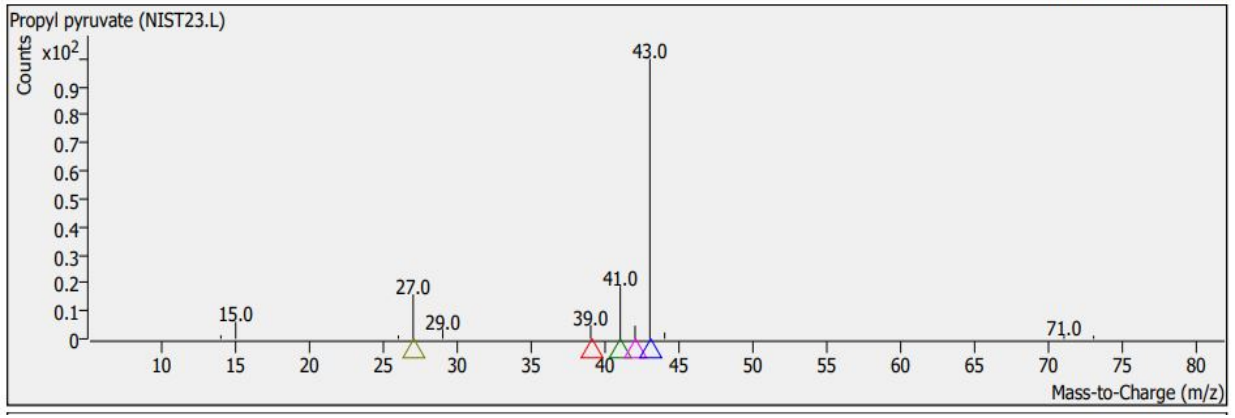
Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Skin
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Fire
In case of fire: Use CO2, dry chemical, or foam for extinction
Storage
Store locked up
Store in a well-ventilated place. Keep cool
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
None identified

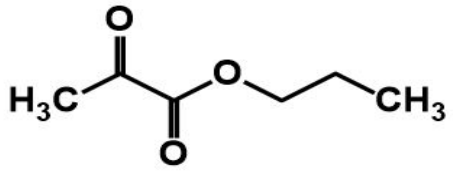
Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Propyl pyruvate, CAS 1000431-41-8 / RT: 3.5048 [≈ 7.8 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
3.5048	Propyl pyruvate	1000431-41-8	C6H10O3	129180976		87.8	7.83	25.99





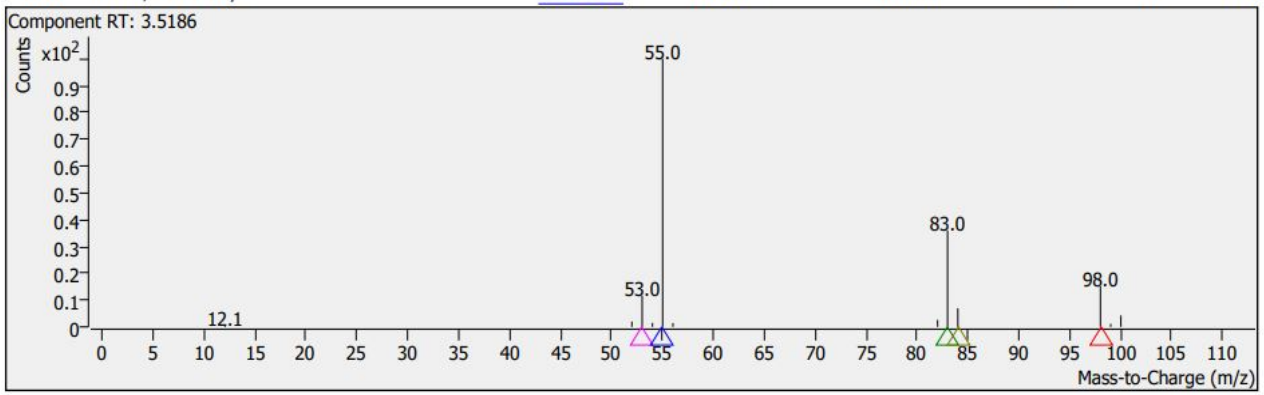


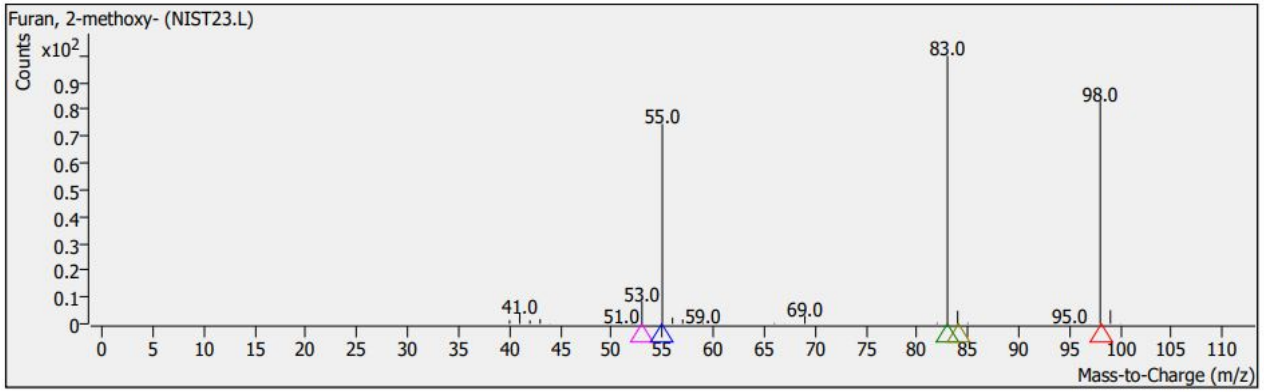
No SDS found/present
Product not classified with regard to hazard phrase

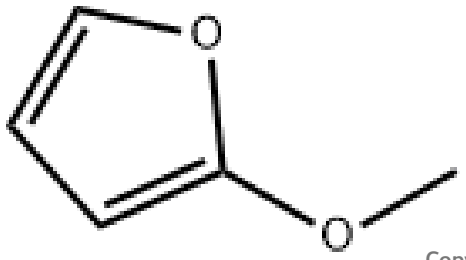
Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Furan, 2-methoxy-, CAS 25414-22-6 / RT: 3.5186 [≈ 0.5 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
3.5186	Furan, 2-methoxy-	25414-22-6	C5H6O2	8759503		82.7	0.53	1.76







2-Methoxyfuran **Revision Date** 29-Mar-2024

Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician

Skin

Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

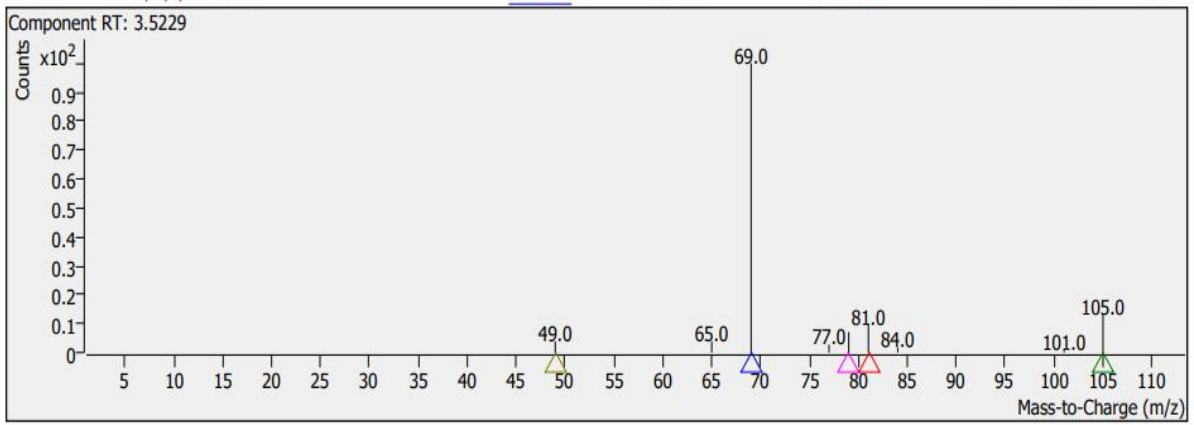
Hazards not otherwise classified (HNOC)

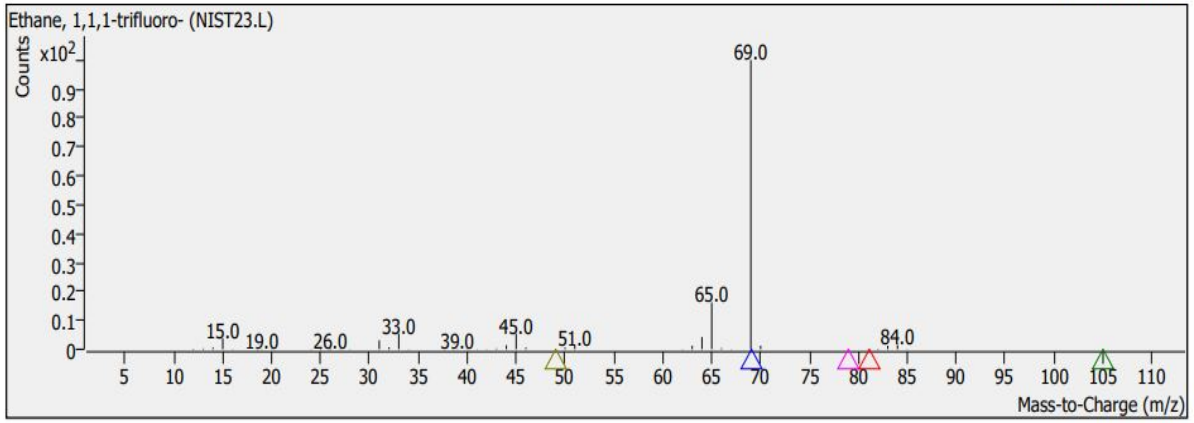
None identified

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Ethane, 1,1,1-trifluoro-, CAS 420-46-2 / RT: 3.5229 [≈ 0.1 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
3.5229	Ethane, 1,1,1-trifluoro-	420-46-2	C2H3F3	1837998		52.1	0.11	0.37





Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Liquefied gas

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.
May cause frostbite.
May displace oxygen and cause rapid suffocation.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position.

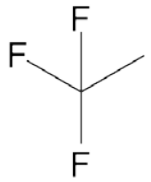
Prevention : Not applicable.

Response : Not applicable.

Storage : Protect from sunlight. Store in a well-ventilated place.

Disposal : Not applicable.

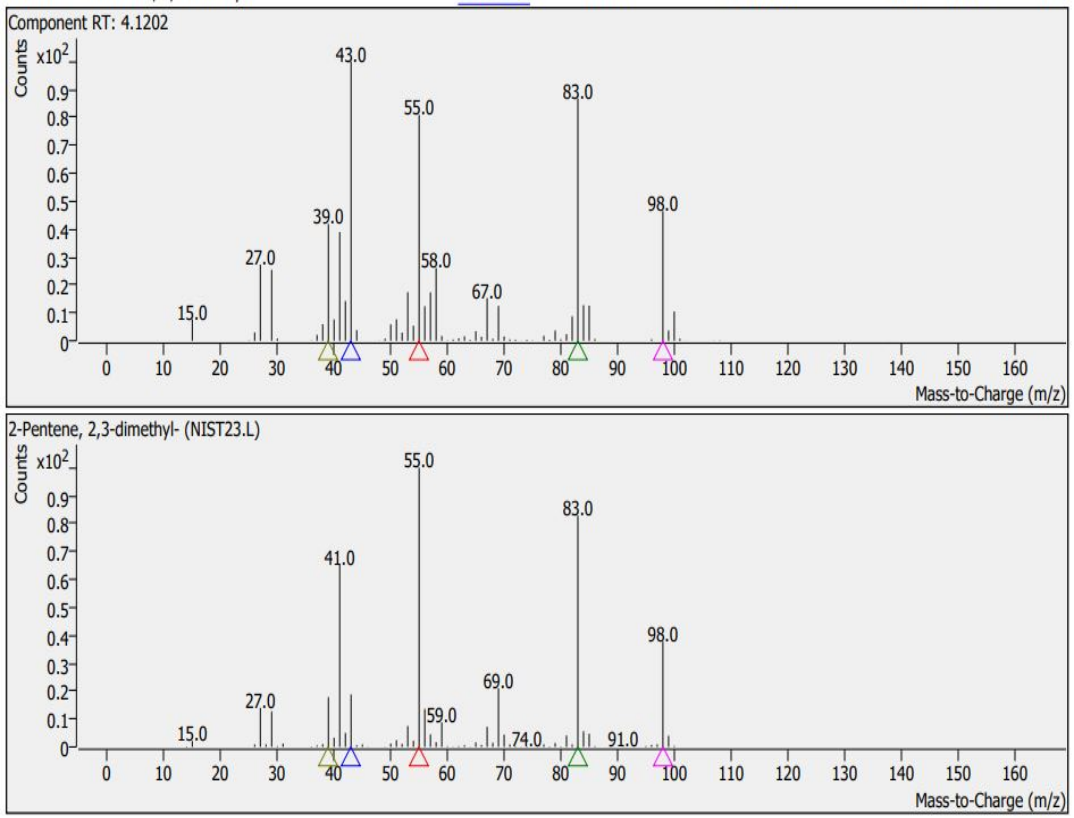
Hazards not otherwise classified : Liquid can cause burns similar to frostbite.



Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

2-Pentene, 2,3-dimethyl-, CAS 10574-37-5 / RT: 4.12 [≈ 12.1 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
4.1202	2-Pentene, 2,3-dimethyl-	10574-37-5	C7H14	199000520		89.9	12.07	40.04



2. Hazard identification

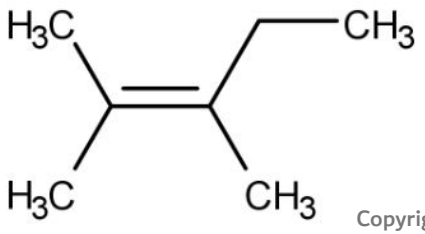
2.1 Classification of the substance or mixture

Flammable liquids, Category 2
Aspiration hazard, Category 1

2.2 GHS label elements, including precautionary statements

Pictogram(s)

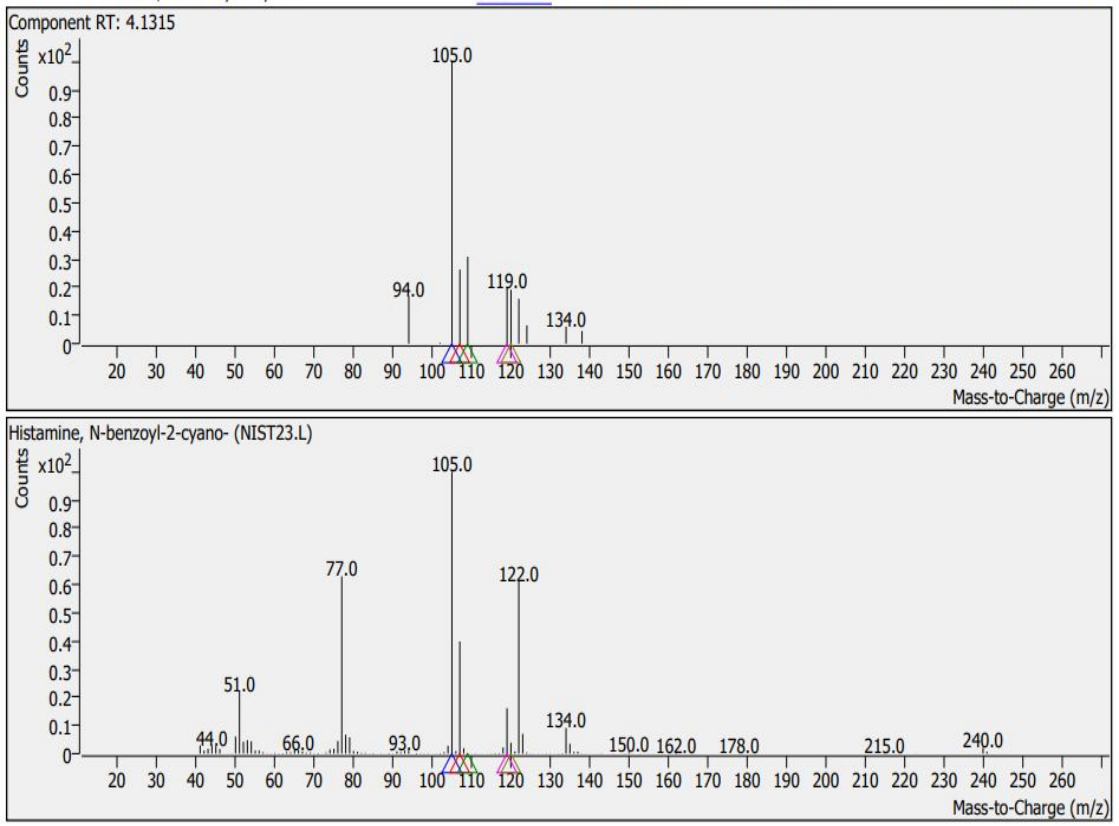
Signal word	Danger
Hazard statement(s)	H225 Highly flammable liquid and vapour
	H304 May be fatal if swallowed and enters airways
Precautionary statement(s)	
Prevention	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P233 Keep container tightly closed.
	P240 Ground and bond container and receiving equipment.
	P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.
	P242 Use non-sparking tools.
	P243 Take action to prevent static discharges.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response	P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
	P370+P378 In case of fire: Use ... to extinguish.
	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/…
	P331 Do NOT induce vomiting.

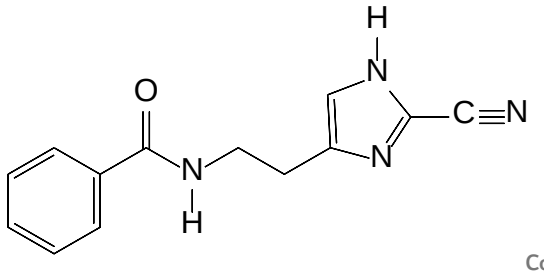


Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Histamine, N-benzoyl-2-cyano, CAS 74419-68-4/ RT: 4.1315 [≈ 0.1 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
4.1315	Histamine, N-benzoyl-2-cyano-	74419-68-4	C13H12N4O	1211450		53.5	0.07	0.24





Histamine

Article Talk

From Wikipedia, the free encyclopedia

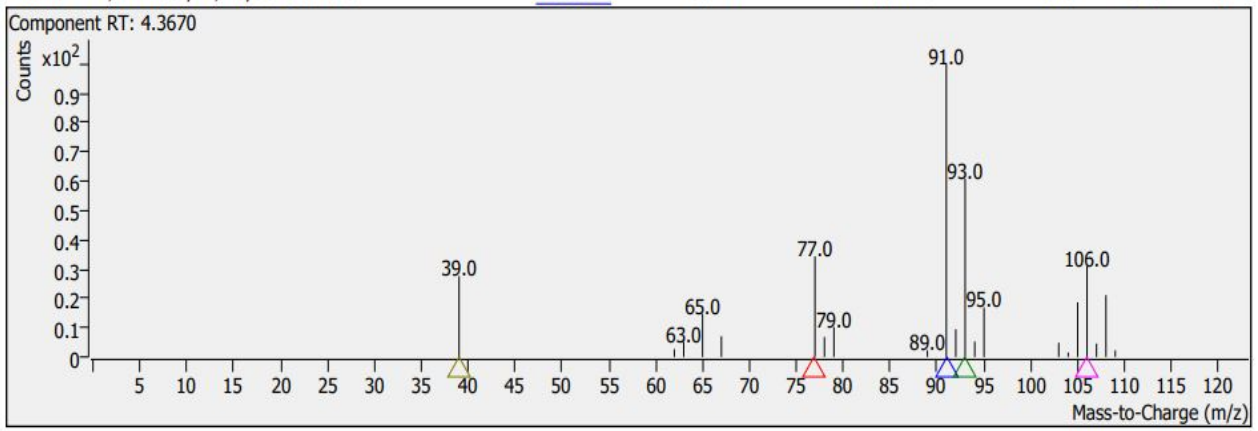
For the use as an immunostimulant drug, see Histamine dihydrochloride.

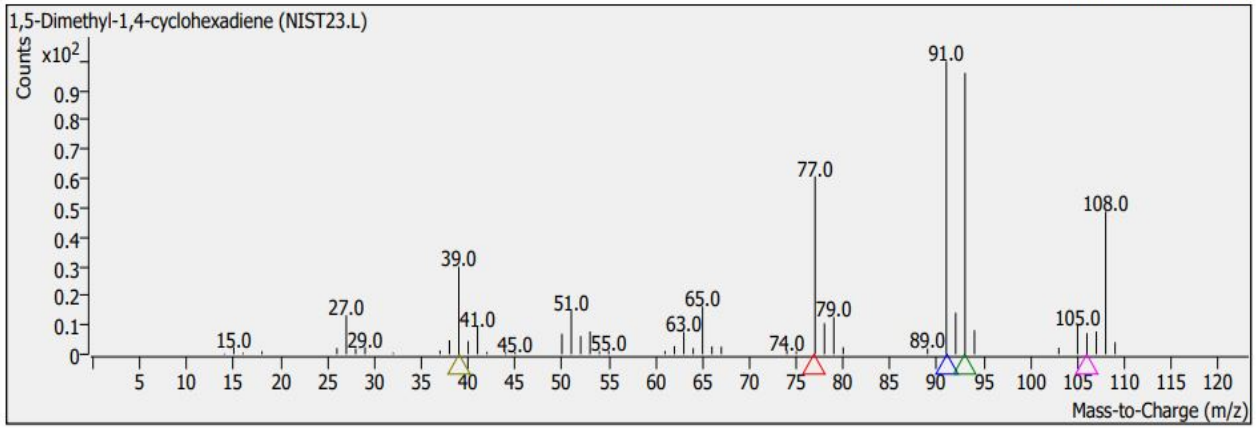
Histamine is an organic nitrogenous compound involved in local immune responses communication, as well as regulating physiological functions in the gut and acting as a neurotransmitter for the brain, spinal cord, and uterus.[3][4] Discovered in 1910, histamine has been considered a local hormone (autocoid) because it's produced without involvement of the classic endocrine glands; however, in recent years, histamine has been recognized as a central neurotransmitter.[5] Histamine is involved in the inflammatory response and has a central role as a mediator of itching.[6] As part of an immune response to foreign pathogens, histamine is produced by basophils and by mast cells found in nearby connective tissues. Histamine increases the permeability of the capillaries to white blood cells and some proteins, to allow them to engage pathogens in the infected tissues.[7] It consists of an imidazole ring attached to an ethylamine chain; under physiological conditions, the amino group of the side-chain is protonated.

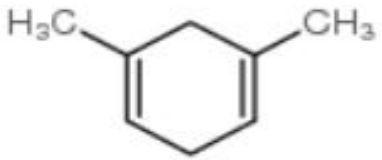
Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

1,5-Dimethyl-1,4-cyclohexadiene, CAS 4190-06-1 / RT: 4.3670 [≈ 0.3 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
4.3670	1,5-Dimethyl-1,4-cyclohexadiene	4190-06-1	C8H12	4562178		82.0	0.28	0.92







1,5-DIMETHYL-1,4-CYCLOHEXADIENE SDS

SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

Creation Date: Aug 14, 2017

Revision Date: Aug 14, 2017

1.Identification

1.1 GHS Product identifier

Product name	1,5-dimethylcyclohexa-1,4-diene

1.2 Other means of identification

Product number	-
Other names	1,5-dimethyl-cyclohexa-1,4-diene

1.3 Recommended use of the chemical and restrictions on use

Identified uses	For industry use only.
Uses advised against	no data available

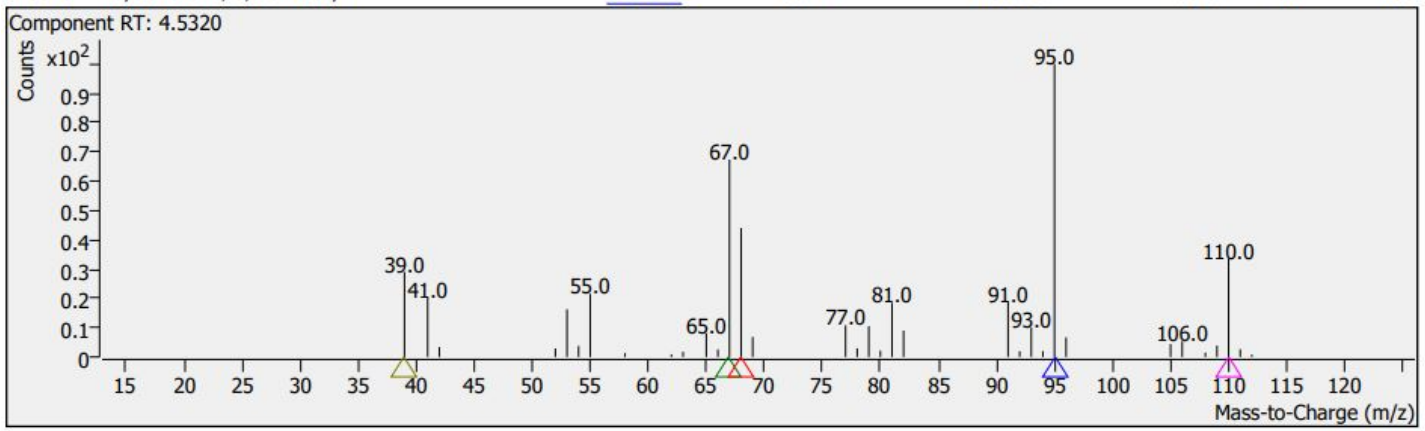
Weitere Details s.u. SS, LookChem

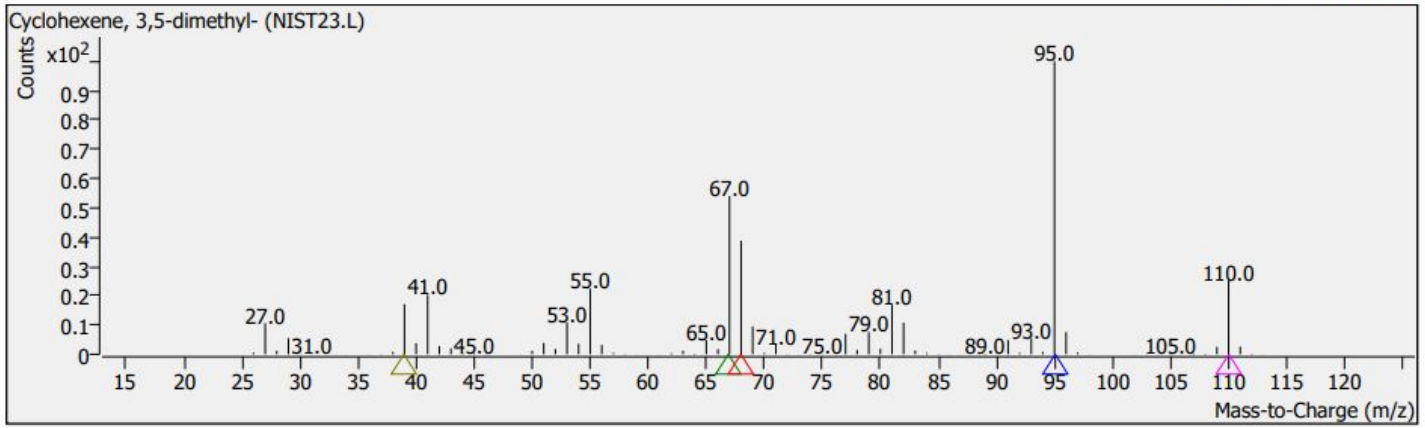
Adobe Acrobat Document

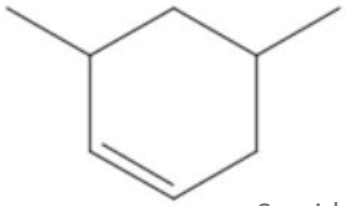
Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Cyclohexene, 3,5-dimethyl-, CAS 823-17-6 / RT: 4.5420 [≈ 0.8 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
4.5320	Cyclohexene, 3,5-dimethyl-	823-17-6	C8H14	12650158		90.8	0.77	2.55







3,5-dimethylcyclohexene SDS

SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

Creation Date: Aug 18, 2017

Revision Date: Aug 18, 2017

1.Identification

1.1 GHS Product identifier

Product name	3,5-dimethyl-cyclohexene

1.2 Other means of identification

Product number	-
Other names	3,5-Dimethylcyclohexene

1.3 Recommended use of the chemical and restrictions on use

Identified uses	For industry use only.
Uses advised against	no data available

Weiter Details s.u. SDS, LookChem

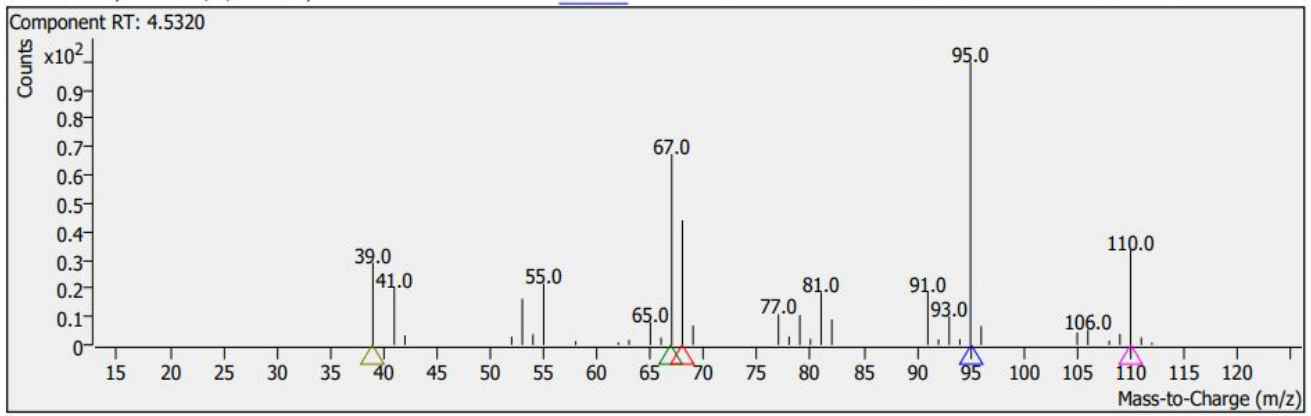
PDF

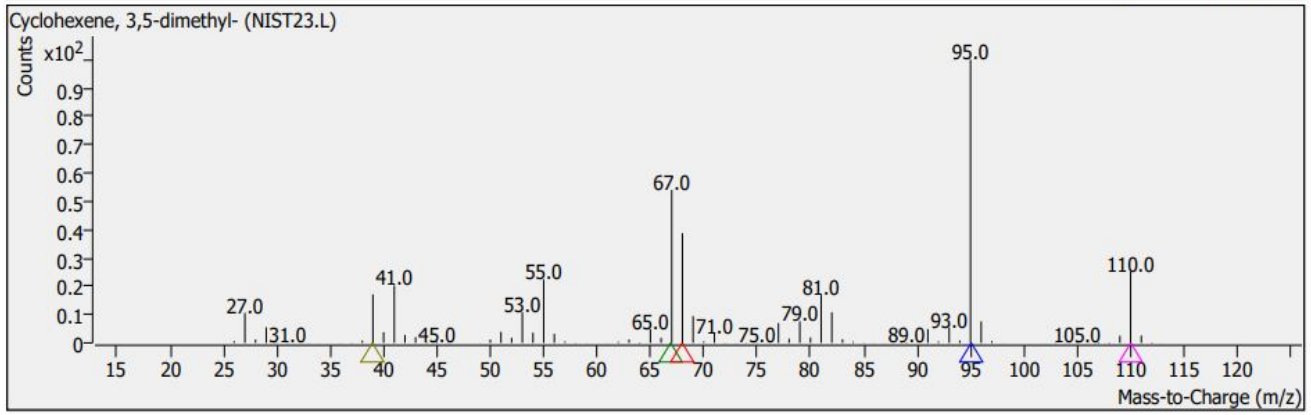
Microsoft Edge
PDF Document

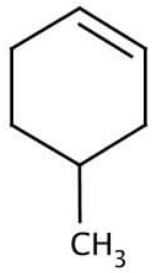
Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Cyclohexene, 4-methyl-, CAS 591-47-9 / RT: 4.5359 [≈ 0.4 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
4.5320	Cyclohexene, 3,5-dimethyl-	823-17-6	C8H14	12650158		90.8	0.77	2.55







SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Flammable liquids, (Category 2)	H225: Highly flammable liquid and vapor.
Skin irritation, (Category 2)	H315: Causes skin irritation.
Eye irritation, (Category 2)	H319: Causes serious eye irritation.

The life science business of Merck operates as MilliporeSigma in the US and Canada

Specific target organ toxicity - single exposure, (Category 3), Respiratory system	H335: May cause respiratory irritation.
Aspiration hazard, (Category 1)	H304: May be fatal if swallowed and enters airways.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word	Danger
Hazard Statements	
H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Precautionary Statements	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P301 + P310 + P331	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

2.3 Other hazards

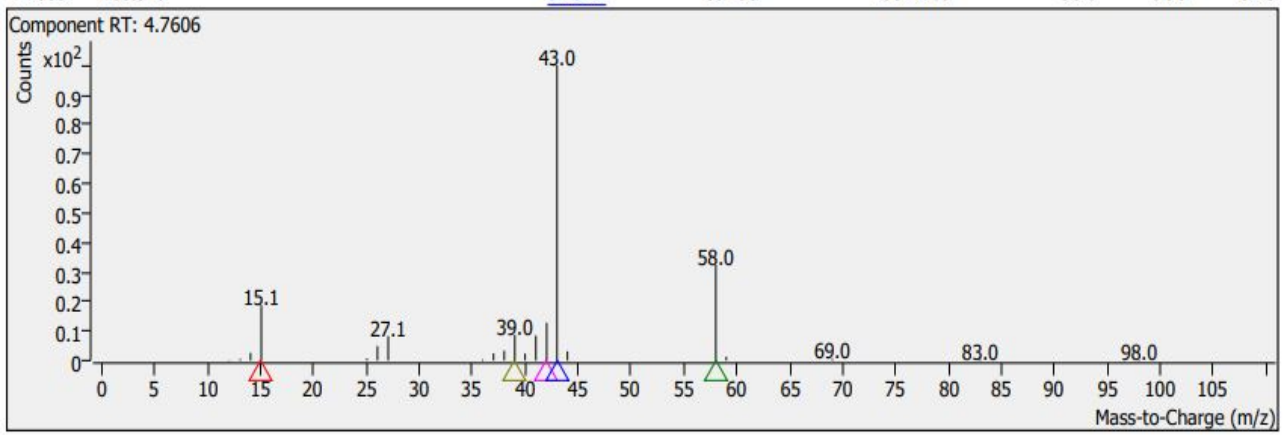
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

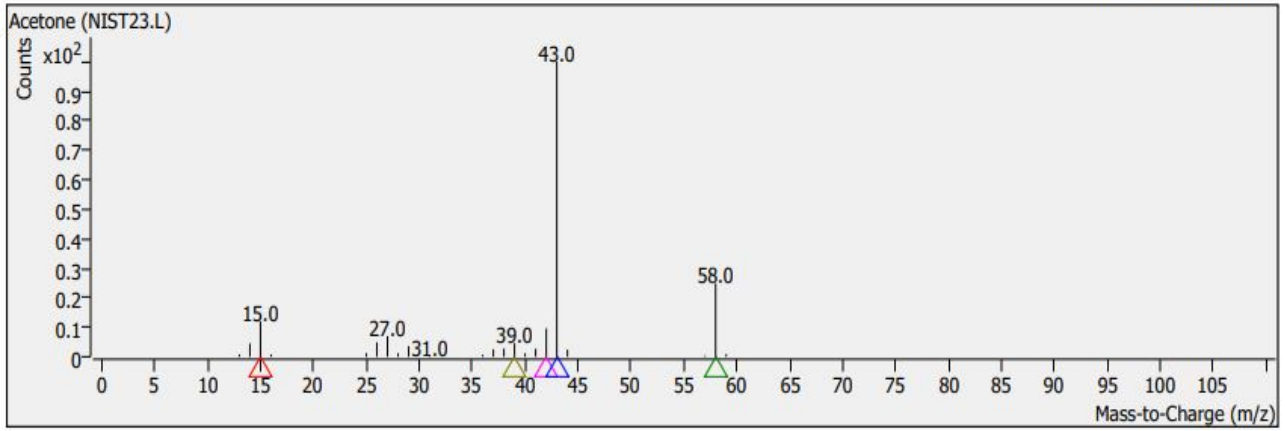
Ecological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Toxicological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

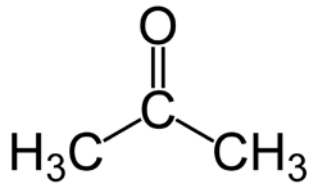
Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Aceton, CAS 67-64-1 / RT: 4.7606 [≈ 1.0 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
4.7606	Acetone	67-64-1	C3H6O	15824489		95.0	0.96	3.18







SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Flammable liquids, (Category 2)	H225: Highly flammable liquid and vapor.
Eye irritation, (Category 2)	H319: Causes serious eye irritation.
Specific target organ toxicity - single exposure, (Category 3), Central nervous system	H336: May cause drowsiness or dizziness.

The life science business of Merck operates as MilliporeSigma in the US and Canada

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word	Danger
Hazard Statements	
H225	Highly flammable liquid and vapor.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
Precautionary Statements	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use non-sparking tools.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard information (EU)	
EUH066	Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

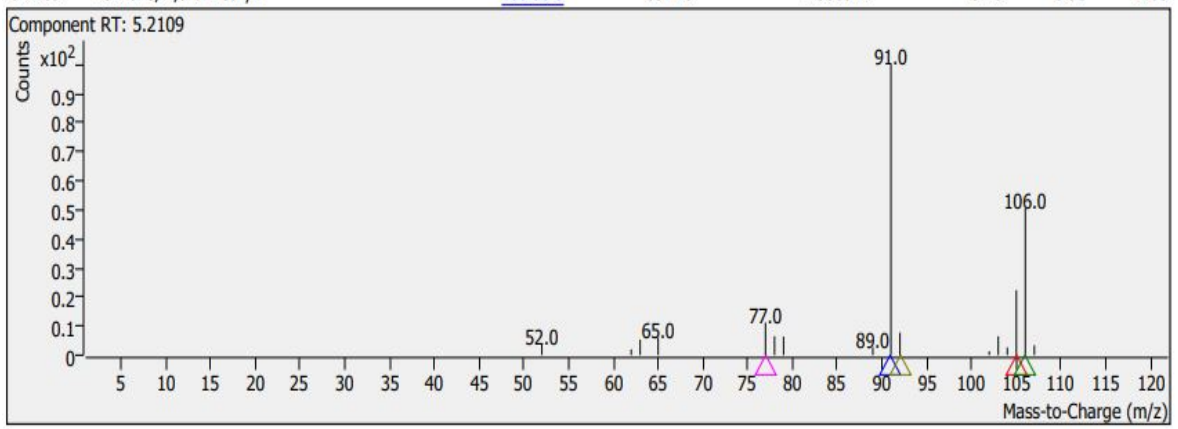
Ecological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Toxicological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

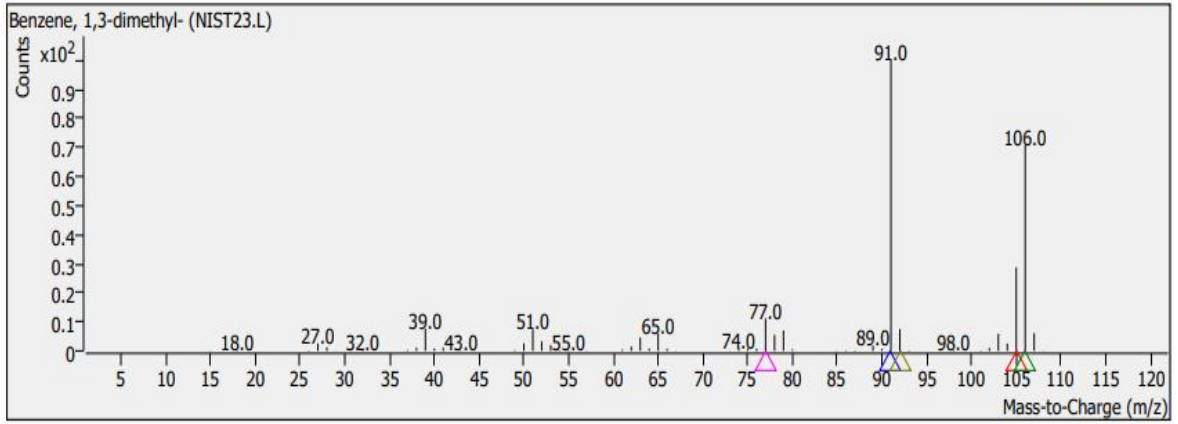
The life science business of Merck operates as MilliporeSigma in the US and Canada

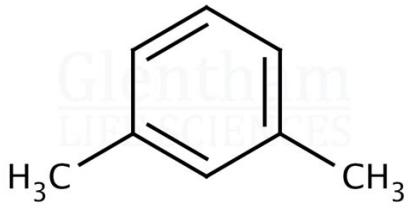
Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Benzene, 1,2-dimethyl-, CAS 108-38-3 / RT = 5.2109 [≈ 0.3 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
5.2109	Benzene, 1,3-dimethyl-	108-38-3	C8H10	4990927		92.9	0.30	1.00







SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Flammable liquids (Category 3), H226
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312
Skin irritation (Category 2), H315
Eye irritation (Category 2), H319
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
Aspiration hazard (Category 1), H304
Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word: Danger

Hazard statement(s)

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312 + H332	Harmful in contact with skin or if inhaled
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P261	Avoid breathing vapours.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331	Do NOT induce vomiting.
Supplemental Hazard Statements	none

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

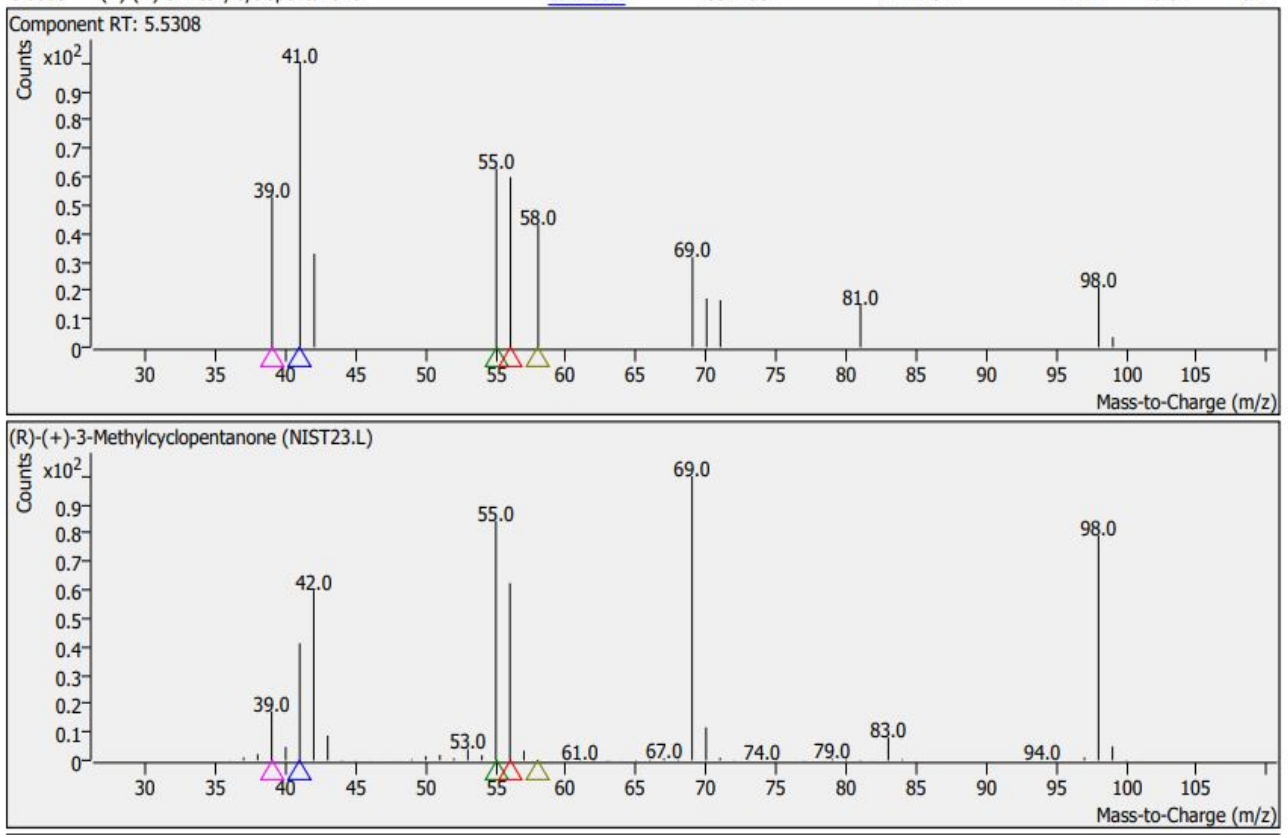
3.1 Substances

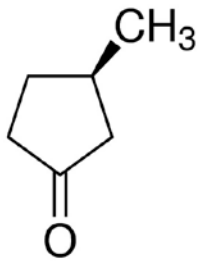
Synonyms	:	1,3-Dimethylbenzene
Formula	:	C_8H_{10}
Molecular weight	:	106.17 g/mol
CAS-No.	:	108-38-3
EC-No.	:	203-576-3
Index-No.	:	601-022-00-9

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

(R)-(+)-3-Methylcyclopentanone, CAS 6672-30-6 / RT = 5.2484/5.5308 [≈ 0.2 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
5.5308	(R)-(+)-3-Methylcyclopentanone	6672-30-6	C6H10O	1212191		74.2	0.07	0.24





Product identifier

Product name	: (R)-(+)-3-METHYLCYCLOPENTANONE
CBnumber	: CB9206841
CAS	: 6672-30-6
EINECS Number	: 229-711-6
Synonyms	: (R)-(+)-3-Methylcyclopentanone

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	: For R&D use only. Not for medicinal, household or other use.
Uses advised against	: none

Company Identification

Company	: Chemicalbook
Address	: Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone	: 400-158-6606

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)

Signal word: Warning

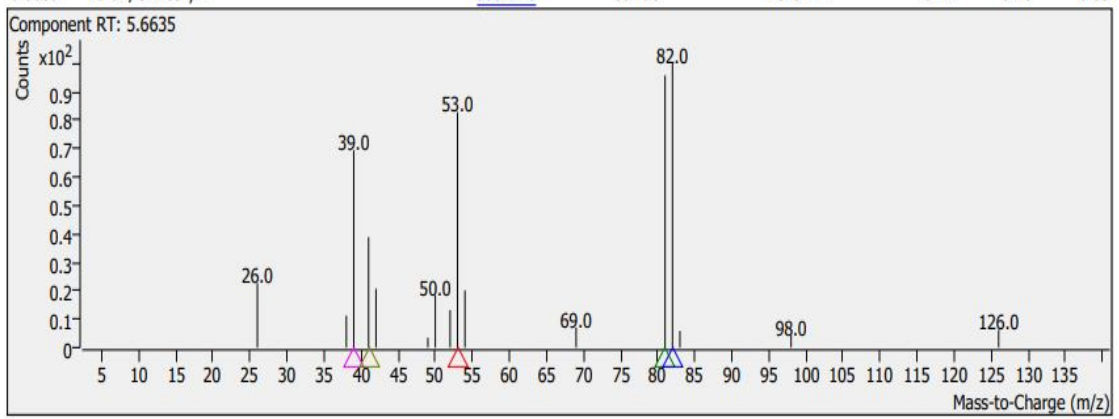
Hazard statements

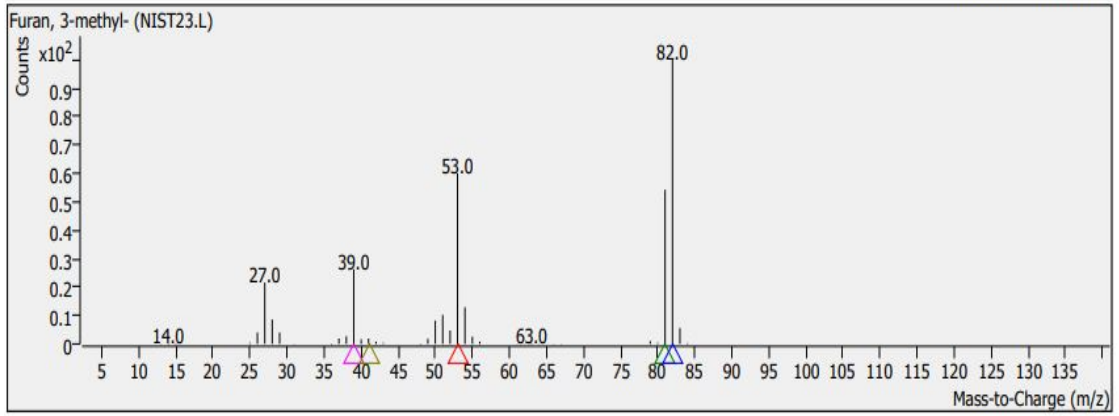
H226 Flammable liquid and vapour

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Furan, 3-Methyl-, CAS 930-27-8 / RT = 5.6635 [≈ 0.2 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
5.6635	Furan, 3-methyl-	930-27-8	C5H6O	2619124		81.2	0.16	0.53



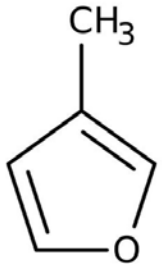


7.1 Hazards Identification

7.1.1 GHS Classification

Pictogram(s)	Acute Toxic Irritant
Signal	Danger
GHS Hazard Statements	H302 (92.68%): Harmful if swallowed [Warning Acute toxicity, oral] H331 (95.12%): Toxic if inhaled [Danger Acute toxicity, inhalation]
Precautionary Statement Codes	P261, P264, P270, P271, P301+P317, P304+P340, P316, P321, P330, P403+P233, P405, and P501 (The corresponding statement to each P-code can be found at the GHS Classification page.)
ECHA C&L Notifications Summary	*Aggregated GHS information provided by 44 reports by companies from 5 notifications to the ECHA C&L Inventory. Each notification may be associated with multiple companies.* *Reported as not meeting GHS hazard criteria by 3 of 44 reports by companies. For more detailed information, please visit ECHA C&L website.* *Of the 4 notification(s) provided by 41 of 44 reports by companies with hazard statement code(s).* *Information may vary between notifications depending on impurities, additives, and other factors. The percentage value in parenthesis indicates the notified classification ratio from companies that provide hazard codes. Only hazard codes with percentage values above 10% are shown.*

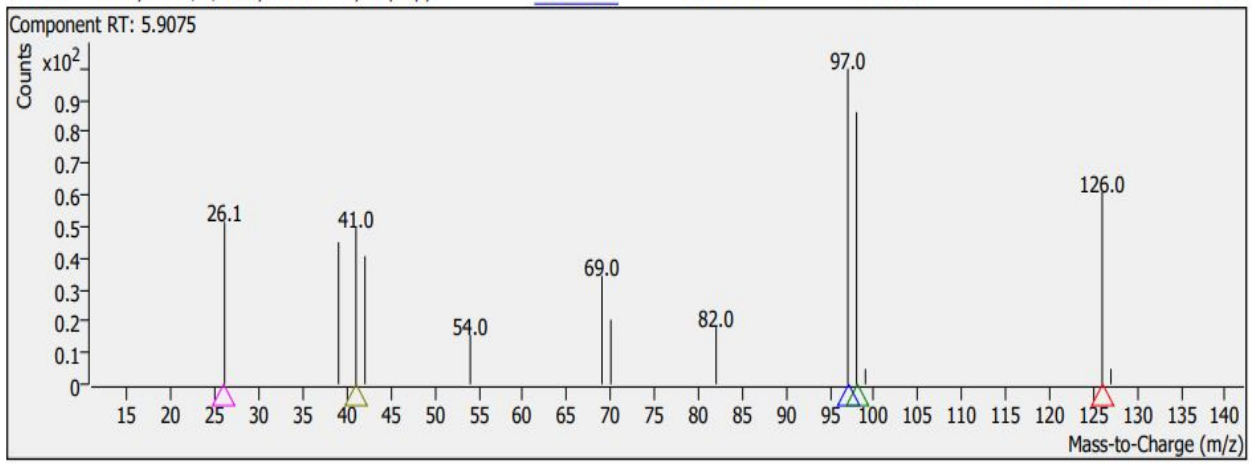
▸ European Chemicals Agency (ECHA)

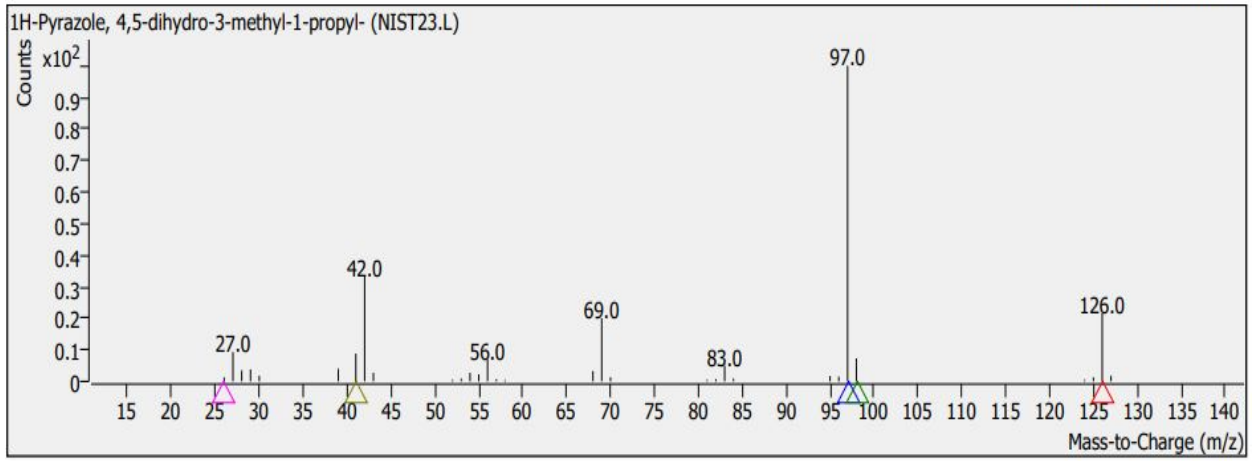


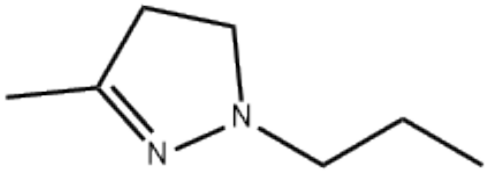
Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

1H-Pyrazole, 4,5-dihydro-3methyl-1-propyl-, CAS 26964-49-8 / RT = 5.9075 [≈ 0.1 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
5.9075	1H-Pyrazole, 4,5-dihydro-3-methyl-1-propyl-	26964-49-8	C7H14N2	1382050		75.0	0.08	0.28







2.Hazard identification

2.1 Classification of the substance or mixture

no data available

2.2 GHS label elements, including precautionary statements

Pictogram(s)	no data available
Signal word	no data available
Hazard statement(s)	no data available
Precautionary statement(s)	
Prevention	no data available
Response	no data available
Storage	no data available
Disposal	no data available

?

2.3 Other hazards which do not result in classification

no data available

3.Composition/information on ingredients

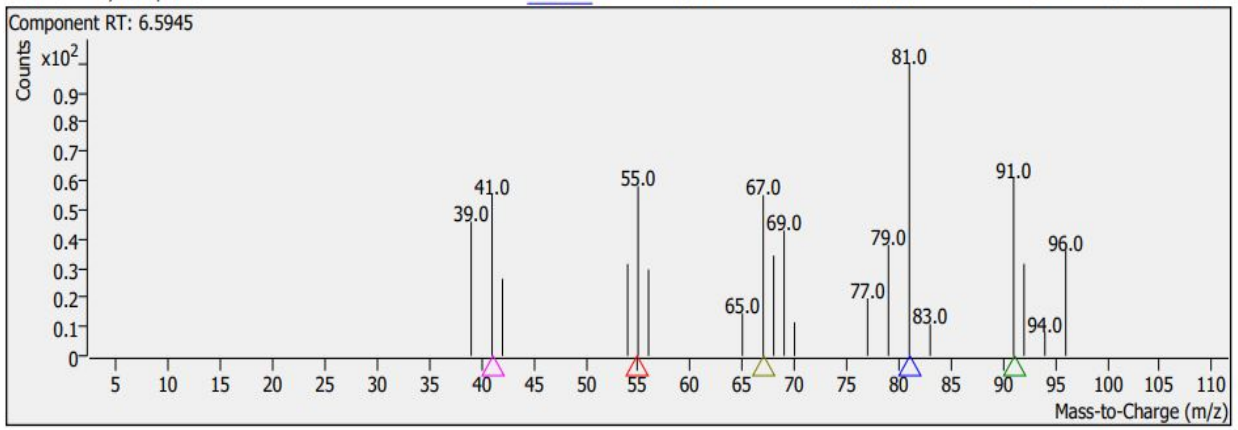
3.1 Substances

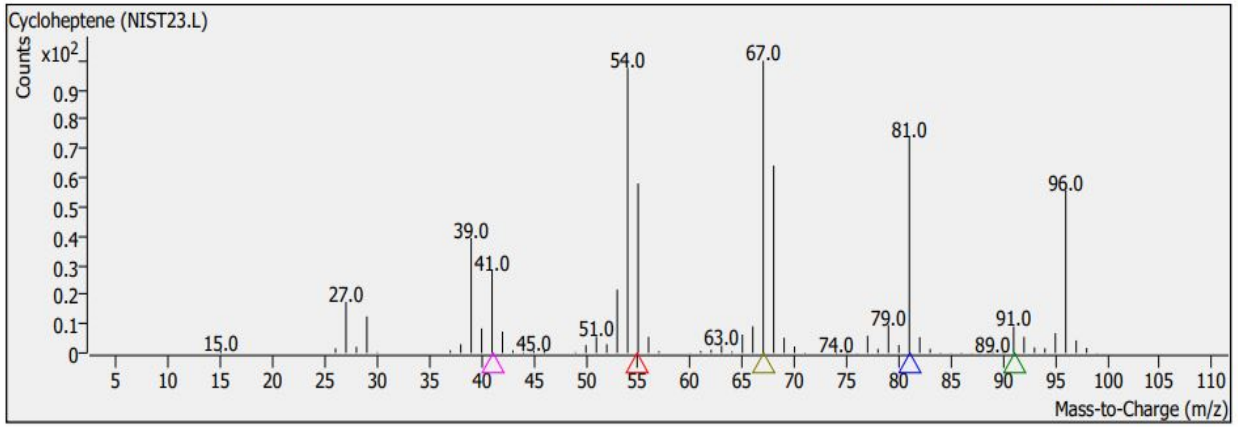
Chemical name	Common names and synonyms	CAS number	EC number	Concentration
5-methyl-2-propyl-3,4-dihydropyrazole	5-methyl-2-propyl-3,4-dihydropyrazole	26964-49-8	none	100%

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Cycloheptene, CAS 628-92-2 / RT = 6.5945 [≈ 0.2 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
6.5945	Cycloheptene	628-92-2	C7H12	3017986		73.2	0.18	0.61





8 Safety and Hazards

8.1 Hazards Identification

8.1.1 GHS Classification

Pictogram(s)	Flammable
Signal	Danger
GHS Hazard Statements	H225 (100%): Highly Flammable liquid and vapor [Danger Flammable liquids]
Precautionary Statement Codes	P210, P233, P240, P241, P242, P243, P280, P303+P361+P353, P370+P378, P403+P235, and P501 (The corresponding statement to each P-code can be found at the GHS Classification page.)
ECHA C&L Notifications Summary	*Aggregated GHS information provided by 75 reports by companies from 2 notifications to the ECHA C&L Inventory.* *Information may vary between notifications depending on impurities, additives, and other factors. The percentage value in parenthesis indicates the notified classification ratio from companies that provide hazard codes. Only hazard codes with percentage values above 10% are shown.*

▸ European Chemicals Agency (ECHA)

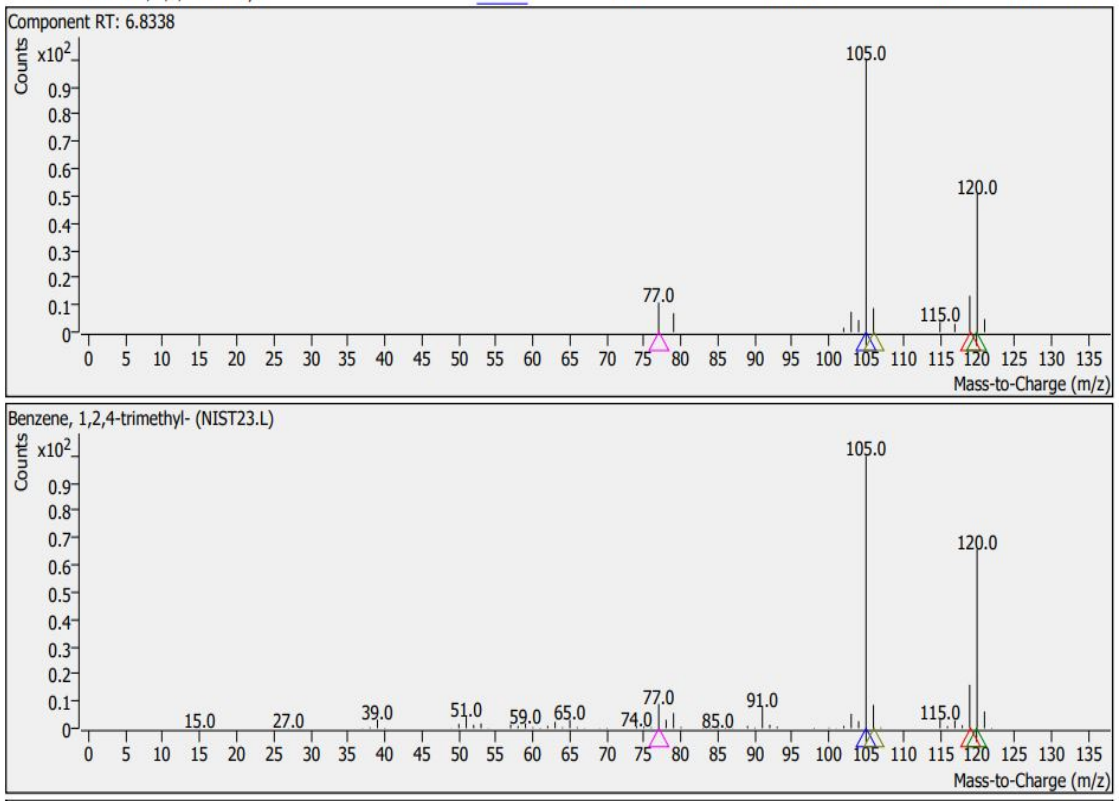
Synonyms	CYCLOHEPTENE 628-92-2 cis-Cycloheptene (Z)-Cycloheptene 45509-99-7 View More...
Molecular Weight	96.17 g/mol *Computed by PubChem 2.2 (PubChem release 2021.10.14)*
Dates	Create: 2005-03-26 Modify: 2024-09-14
Description	Cycloheptene appears as a colorless oily liquid. Insoluble in water and less dense than water. Vapors heavier than air. Inhalation of high concentrations may have a narcotic effect. Used to make other chemicals.

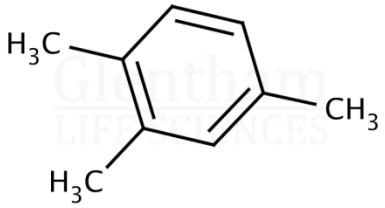
▸ CAMEO Chemicals

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Benzene, 1,2,4-trimethyl-, CAS 95-63-6 / RT = 6.8338 [≈ 0.1 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
6.8338	Benzene, 1,2,4-trimethyl-	95-63-6	C9H12	1466138		86.2	0.09	0.29





SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 3), H226
Acute toxicity, Inhalation (Category 4), H332
Skin irritation (Category 2), H315
Eye irritation (Category 2), H319
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
Aspiration hazard (Category 1), H304
Long-term (chronic) aquatic hazard (Category 2), H411

Aldrich- T73601 Page 1 of 11

The life science business of Merck operates as MilliporeSigma in the US and Canada

1 GHS Classification

1 of 5 View All

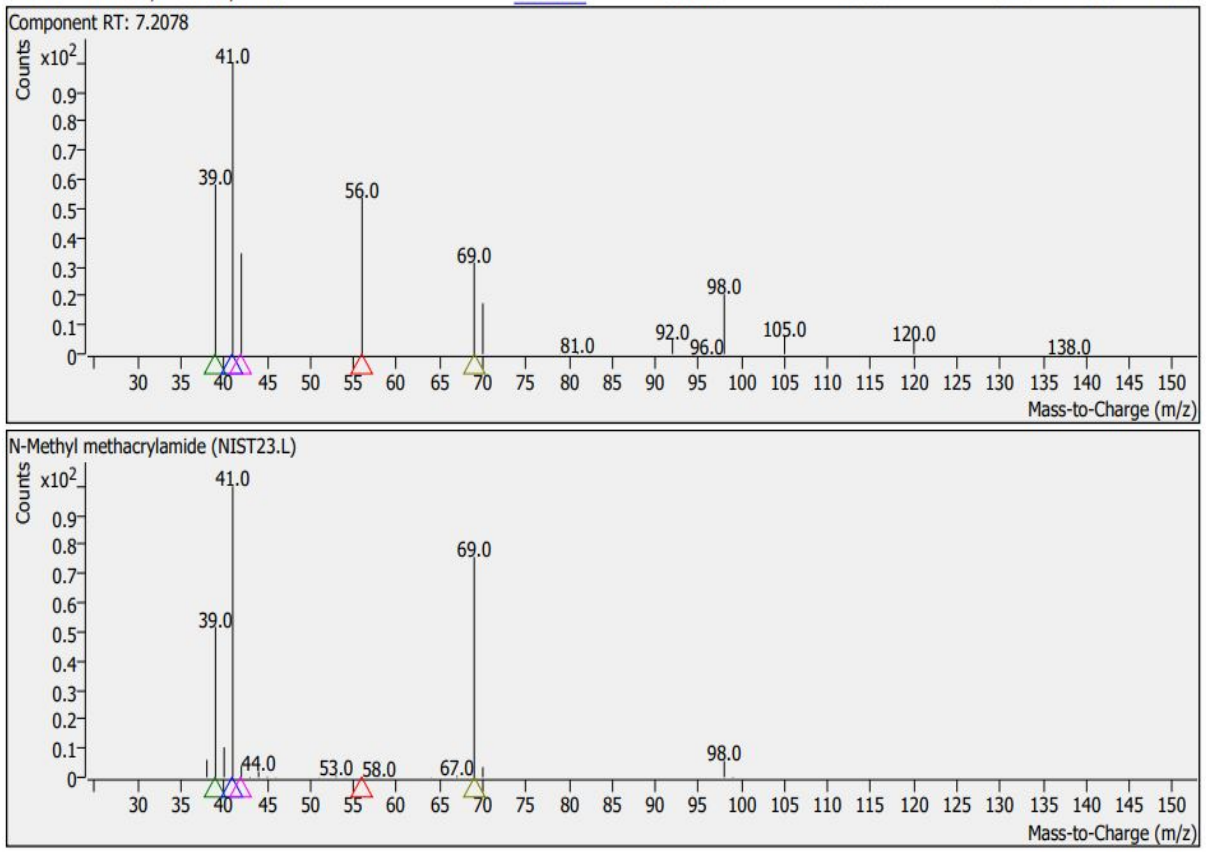
Pictogram(s)	Flammable, Irritant, Health Hazard, Environmental Hazard
Signal	Danger
GHS Hazard Statements	H226 (100%): Flammable liquid and vapor [Warning Flammable liquids] H304 (10.5%): May be fatal if swallowed and enters airways [Danger Aspiration hazard] H315 (99.21%): Causes skin irritation [Warning Skin corrosion/irritation] H319 (100%): Causes serious eye irritation [Warning Serious eye damage/eye irritation] H332 (99.97%): Harmful if inhaled [Warning Acute toxicity, inhalation] H335 (100%): May cause respiratory irritation [Warning Specific target organ toxicity, single exposure; Respiratory tract irritation] H411 (99.31%): Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment, long-term hazard]
Precautionary Statement Codes	P210, P233, P240, P241, P242, P243, P261, P264, P264+P265, P271, P273, P280, P301+P316, P302+P352, P303+P361+P353, P304+P340, P305+P351+P338, P317, P319, P321, P331, P332+P317, P337+P317, P362+P364, P370+P378, P391, P403+P233, P403+P235, P405, and P501 (The corresponding statement to each P-code can be found at the GHS Classification page.)
ECHA C&L Notifications Summary	*Aggregated GHS information provided by 3183 companies from 57 notifications to the ECHA C&L Inventory. Each notification may be associated with multiple companies.* *Reported as not meeting GHS hazard criteria by 2 of 3183 companies. For more detailed information, please visit ECHA C&L website.* *Of the 56 notification(s) provided by 3181 of 3183 companies with hazard statement code(s).* *Information may vary between notifications depending on impurities, additives, and other factors. The percentage value in parenthesis indicates the notified classification ratio from companies that provide hazard codes. Only hazard codes with percentage values above 10% are shown.*

European Chemicals Agency (ECHA)

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

N-Methyl methacrylamide, CAS 3887-02-3 / RT = 7.2078 [≈ 0.1 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
7.2078	N-Methyl methacrylamide	3887-02-3	C5H9NO	794861		68.5	0.05	0.16



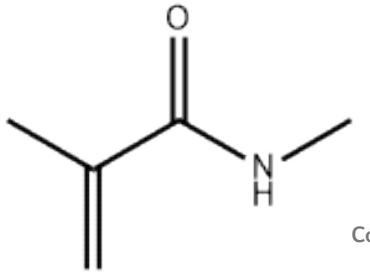
7 Safety and Hazards

7.1 Hazards Identification

7.1.1 GHS Classification

Pictogram(s)	Irritant
Signal	Warning
GHS Hazard Statements	H315 (100%): Causes skin irritation [Warning Skin corrosion/irritation] H319 (100%): Causes serious eye irritation [Warning Serious eye damage/eye irritation] H335 (100%): May cause respiratory irritation [Warning Specific target organ toxicity, single exposure; Respiratory tract irritation]
Precautionary Statement Codes	P261, P264, P264+P265, P271, P280, P302+P352, P304+P340, P305+P351+P338, P319, P321, P332+P317, P337+P317, P362+P364, P403+P233, P405, and P501 (The corresponding statement to each P-code can be found at the GHS Classification page.)
ECHA C&L Notifications Summary	*The GHS information provided by 1 company from 1 notification to the ECHA C&L Inventory.*

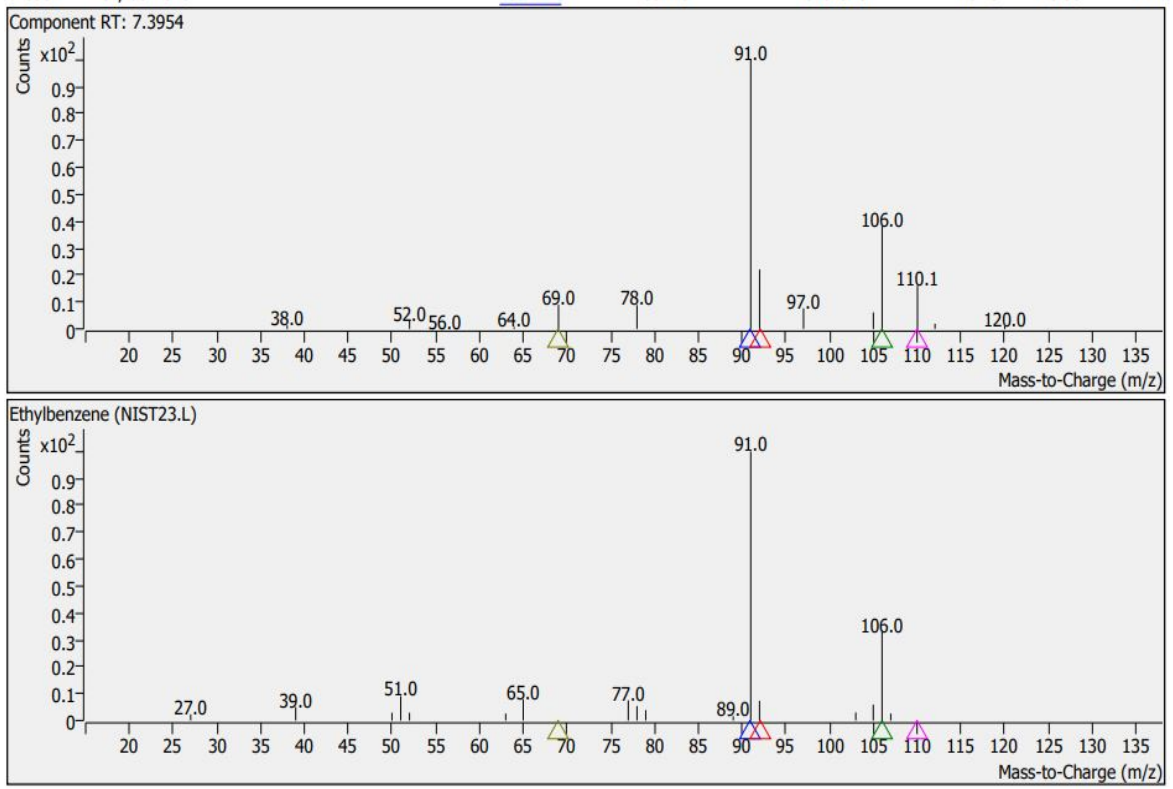
▸ European Chemicals Agency (ECHA)

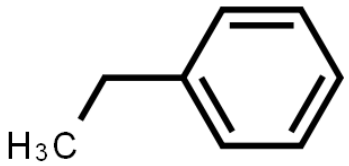


Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Ethylbenzene, CAS 100-41-4 / RT = 7.3954 [≈ 0.4 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
7.3954	Ethylbenzene	100-41-4	C8H10	6184923		64.5	0.38	1.24





1 GHS Classification

1 of 11 — View All

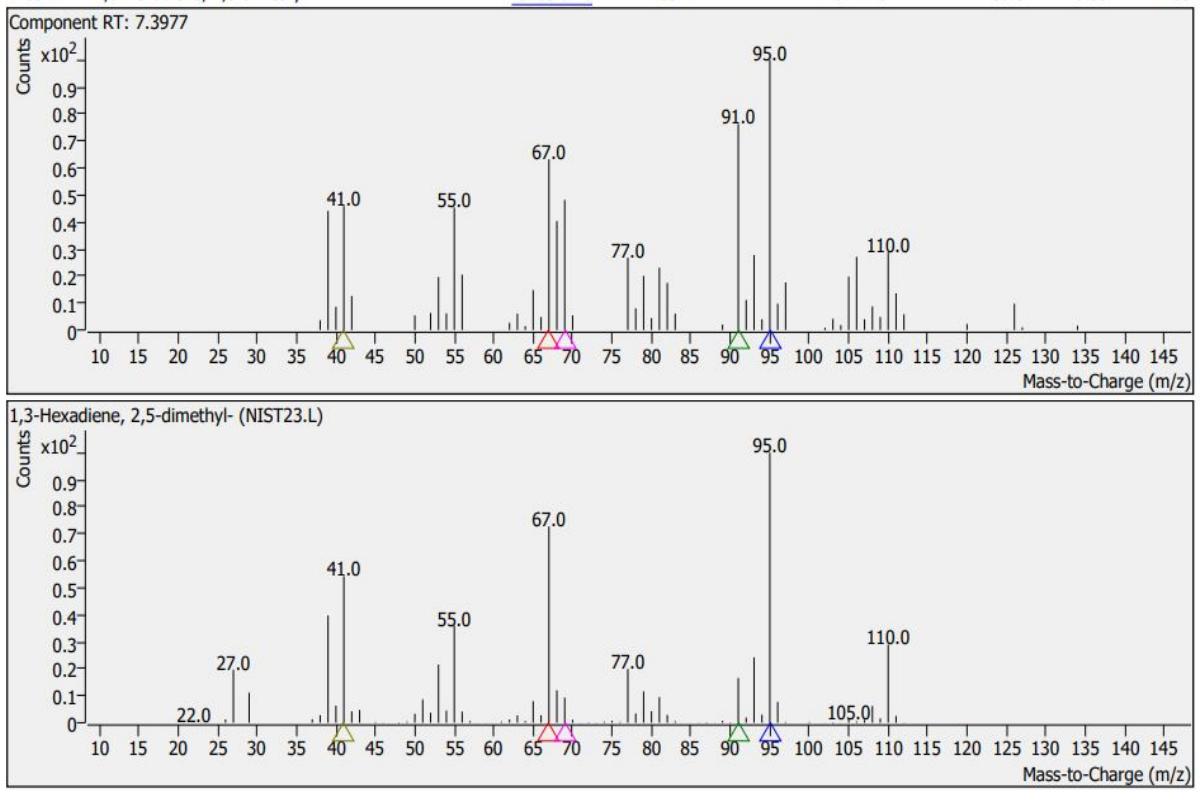
Pictogram(s)	Flammable, Irritant, Health Hazard
Signal	Danger
GHS Hazard Statements	H225 (99.97%): Highly Flammable liquid and vapor [Danger Flammable liquids] H304 (16.41%): May be fatal if swallowed and enters airways [Danger Aspiration hazard] H332 (99.91%): Harmful if inhaled [Warning Acute toxicity, inhalation] H373 (18.83%): May causes damage to organs through prolonged or repeated exposure [Warning Specific target organ toxicity, repeated exposure]
Precautionary Statement Codes	P210, P233, P240, P241, P242, P243, P260, P261, P271, P280, P301+P316, P303+P361+P353, P304+P340, P317, P319, P331, P370+P378, P403+P235, P405, and P501 (The corresponding statement to each P-code can be found at the GHS Classification page.)
ECHA C&L Notifications Summary	*Aggregated GHS information provided by 6991 companies from 68 notifications to the ECHA C&L Inventory. Each notification may be associated with multiple companies.* *Reported as not meeting GHS hazard criteria by 2 of 6991 companies. For more detailed information, please visit ECHA C&L website.* *Of the 67 notification(s) provided by 6989 of 6991 companies with hazard statement code(s).* *Information may vary between notifications depending on impurities, additives, and other factors. The percentage value in parenthesis indicates the notified classification ratio from companies that provide hazard codes. Only hazard codes with percentage values above 10% are shown.*

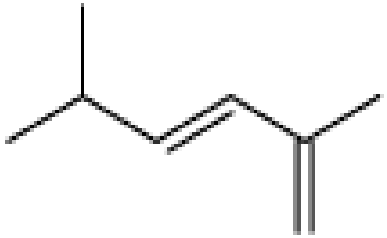
▸ European Chemicals Agency (ECHA)

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

1,3-Hexadiene, 2,5-dimethyl-, CAS 29253-64-3 / RT = 7.3977 [≈ 0.9 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
7.3977	1,3-Hexadiene, 2,5-dimethyl-	29253-64-3	C8H14	14077119		83.6	0.85	2.83





2. Hazard identification

2.1 Classification of the substance or mixture

no data available

2.2 GHS label elements, including precautionary statements

Pictogram(s)	no data available
Signal word	no data available
Hazard statement(s)	no data available
Precautionary statement(s) Prevention	no data available
Response	no data available
Storage	no data available
Disposal	no data available

2.3 Other hazards which do not result in classification

no data available

3. Composition/information on ingredients

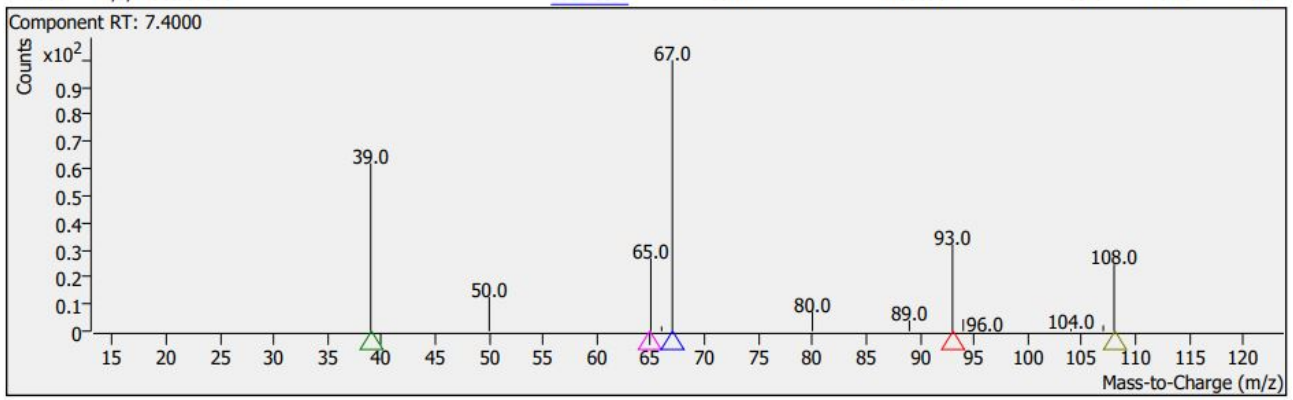
3.1 Substances

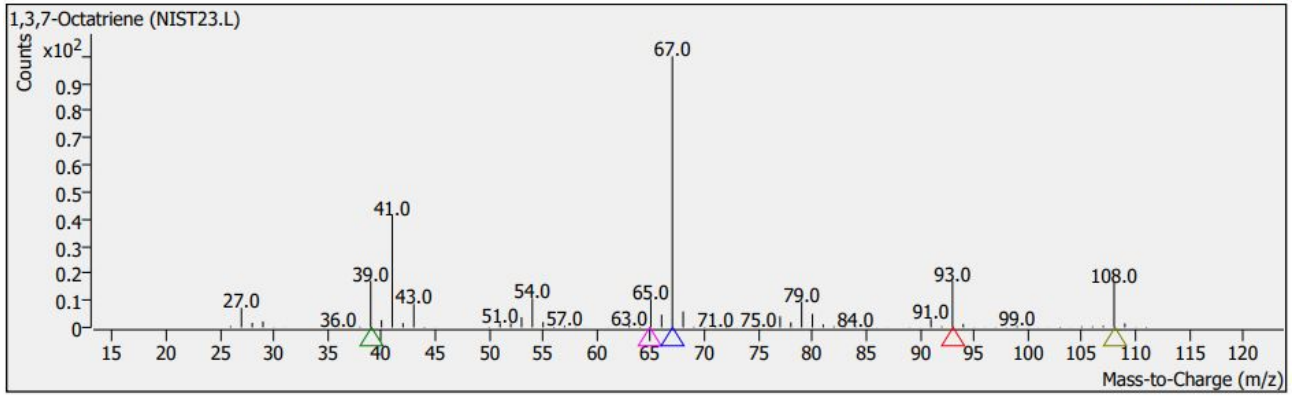
Chemical name	Common names and synonyms	CAS number	EC number	Concentration
2,5-dimethylhexa-1,3-diene	2,5-dimethylhexa-1,3-diene	29253-64-3	none	100%

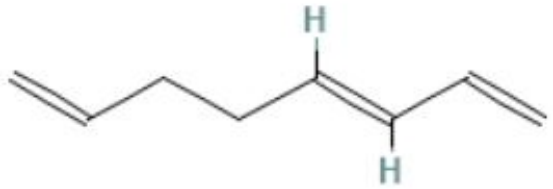
Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

1,3,7-Octatriene, CAS 1002-35-2 / RT = 7.4 [≈ 0.3 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
7.4000	1,3,7-Octatriene	1002-35-3	C8H12	4836937		59.8	0.29	0.97







Safety Data

Back Directory

[Symbol(GHS)]

GHS02

[Signal word]

Danger

[Hazard statements]

H225

[Precautionary statements]

P210-P233-P240-P241-P242-P243-P280-P303+P361+P353-P370+P378-P403+P235-P501

Hazard Information

Back Directory

[Synthesis Reference(s)]

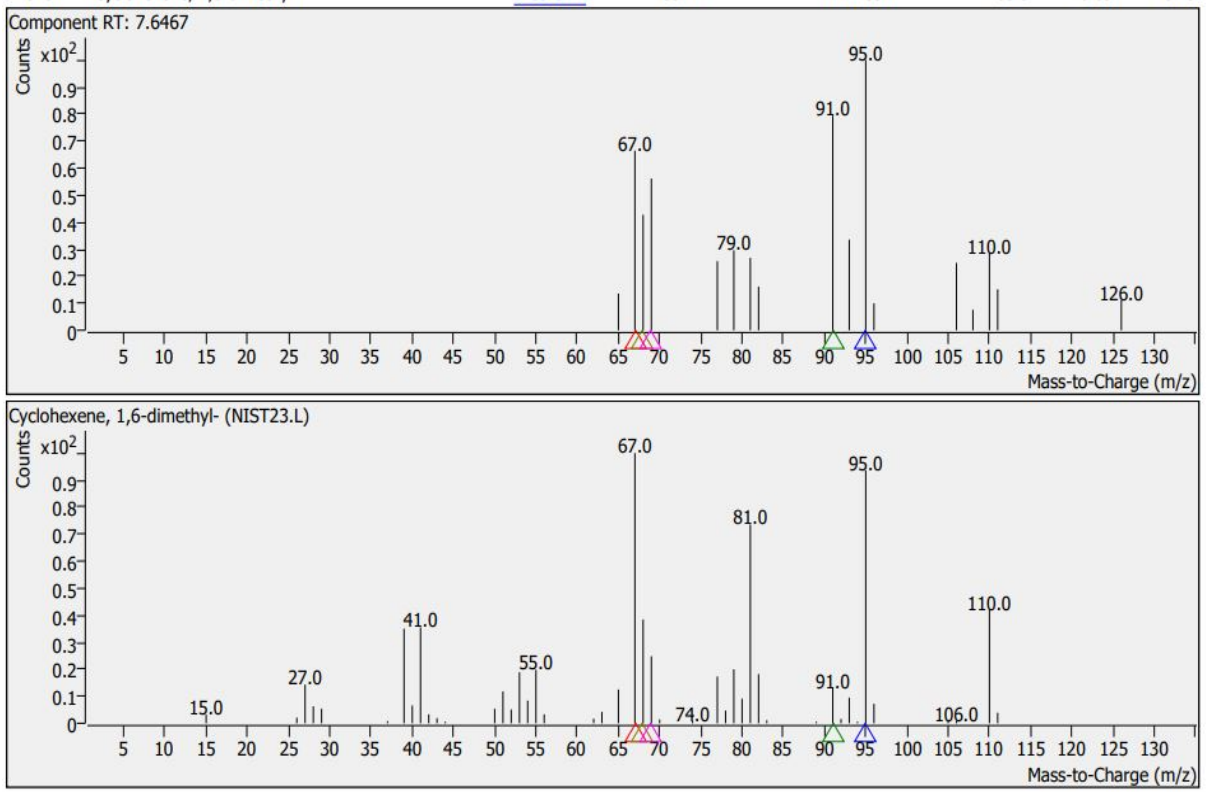
Journal of the American Chemical Society, 89, p. 6793, 1967 **DOI:** 10.1021/ja01001a089

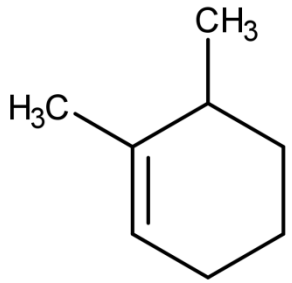
Tags:1002-35-3 Related Product Information

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Cyclohexene, 1,6-dimethyl, CAS 1759-64-4 / RT = 7.6467 [≈ 0.1 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
7.6467	Cyclohexene, 1,6-dimethyl-	1759-64-4	C8H14	1424397		68.5	0.09	0.29





2. Hazard identification

2.1 Classification of the substance or mixture

no data available

2.2 GHS label elements, including precautionary statements

Pictogram(s)	no data available
Signal word	no data available
Hazard statement(s)	no data available
Precautionary statement(s)	
Prevention	no data available
Response	no data available
Storage	no data available
Disposal	no data available

?

2.3 Other hazards which do not result in classification

no data available

3. Composition/information on ingredients

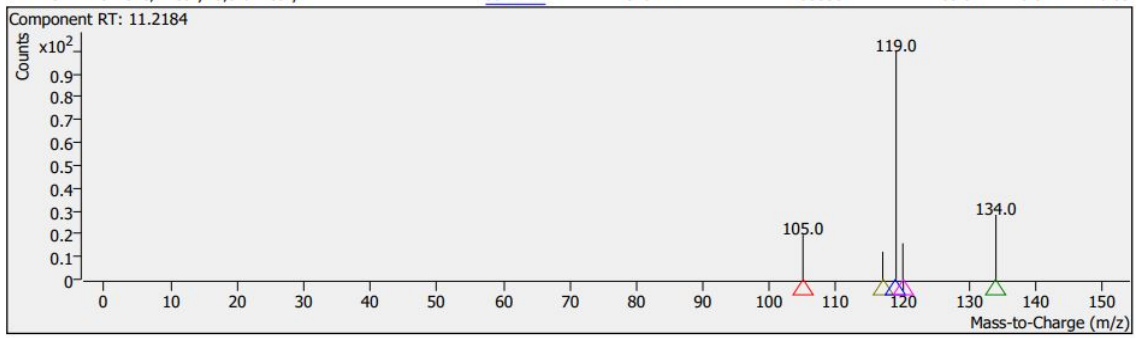
3.1 Substances

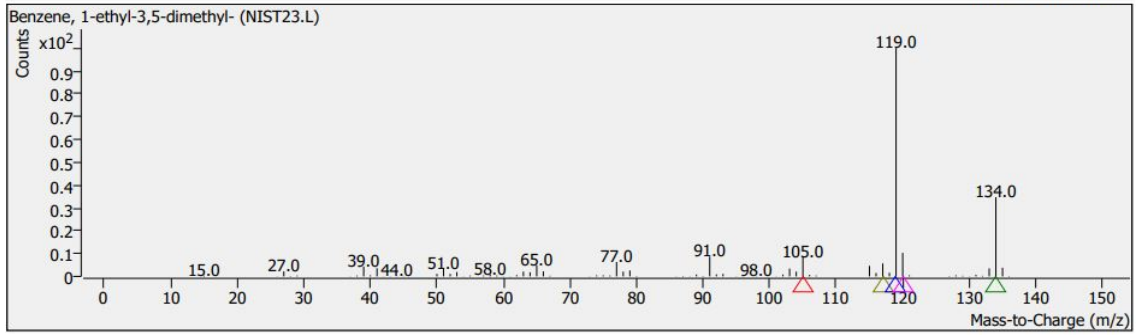
Chemical name	Common names and synonyms	CAS number	EC number	Concentration
1,6-DIMETHYLCYCLOHEXENE	1,6-DIMETHYLCYCLOHEXENE	1759-64-4	none	100%

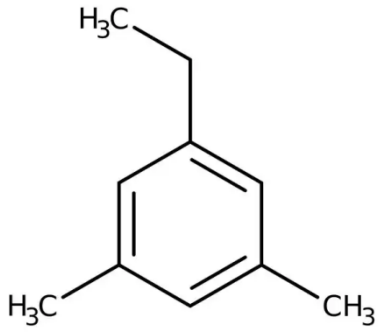
Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Benzene, 1-ethyl-3,5-dimethyl- / RT = 11.2184 [≈ 0.02 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
11.2184	Benzene, 1-ethyl-3,5-dimethyl-	934-74-7	C10H14	253850		68.0	0.02	0.05







1 GHS Classification

Pictogram(s)	Flammable, Irritant
Signal	Danger
GHS Hazard Statements	H225 (13.33%): Highly Flammable liquid and vapor [Danger Flammable liquids] H302 (84.44%): Harmful if swallowed [Warning Acute toxicity, oral] H317 (84.44%): May cause an allergic skin reaction [Warning Sensitization, Skin]
Precautionary Statement Codes	P210, P233, P240, P241, P242, P243, P261, P264, P270, P272, P280, P301+P317, P302+P352, P303+P361+P353, P321, P330, P333+P317, P362+P364, P370+P378, P403+P235, and P501 (The corresponding statement to each P-code can be found at the GHS Classification page.)
ECHA C&L Notifications Summary	*Aggregated GHS information provided by 48 companies from 4 notifications to the ECHA C&L Inventory. Each notification may be associated with multiple companies.* *Reported as not meeting GHS hazard criteria by 3 of 48 companies. For more detailed information, please visit ECHA C&L website.* *Of the 3 notification(s) provided by 45 of 48 companies with hazard statement code(s).* *Information may vary between notifications depending on impurities, additives, and other factors. The percentage value in parenthesis indicates the notified classification ratio from companies that provide hazard codes. Only hazard codes with percentage values above 10% are shown.*

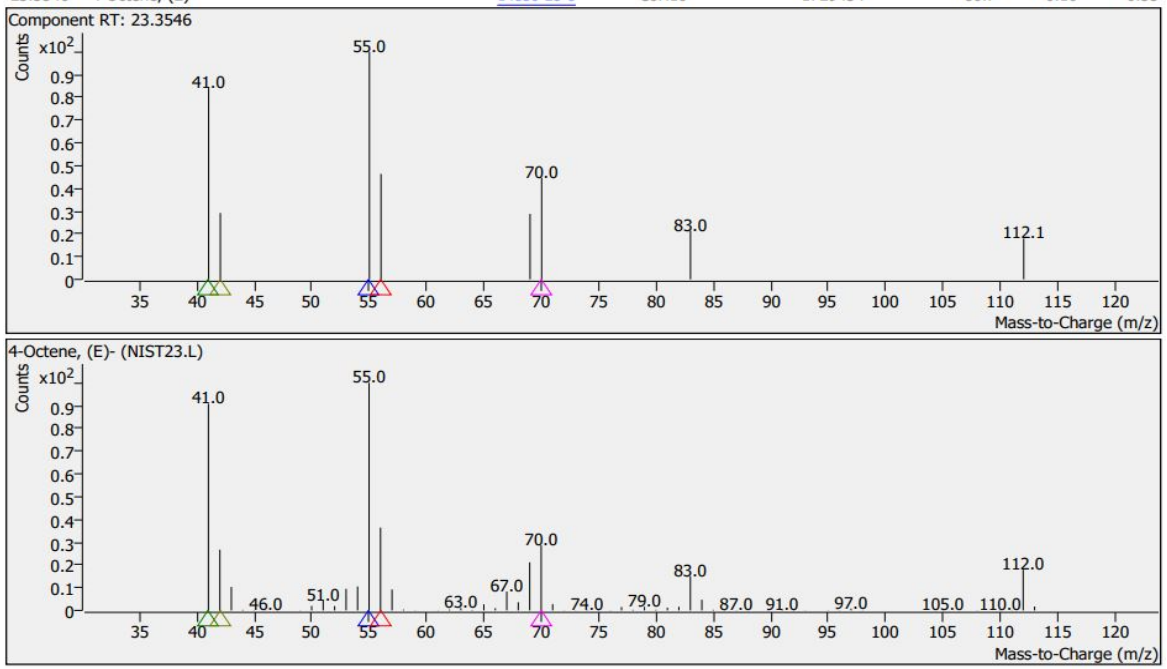
1-Ethyl-3,5-dimethylbenzene

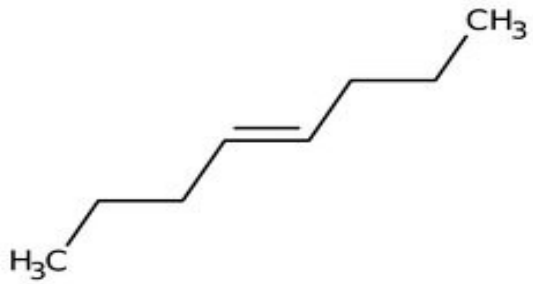
PubChem CID	13627
Structure	2D, 3D
Chemical Safety	Flammable, Irritant Laboratory Chemical Safety Summary (LCSS) Datasheet
Molecular Formula	$C_{10}H_{14}$
Synonyms	1-Ethyl-3,5-dimethylbenzene 5-Ethyl-m-xylene 934-74-7 1,3-DIMETHYL-5-ETHYLBENZENE m-Xylene, 5-ethyl- View More...
Molecular Weight	134.22 g/mol *Computed by PubChem 2.2 (PubChem release 2021.10.14)*
Dates	Create: 2005-03-26 Modify: 2024-05-11

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

4-Octene, (E), CAS 14850-23-8 / RT = 23.3546 [≈ 0.1 Area%]

RT	Compound Name	CAS#	Formula	Area	MI	Match Score	Sample	Sample
23.3546	4-Octene, (E)-	14850-23-8	C8H16	1729434		80.7	0.10	0.35





2.2 GHS label elements, including precautionary statements

Pictogram(s)

Signal word Danger

Hazard statement(s)
H225 Highly flammable liquid and vapour
H304 May be fatal if swallowed and enters airways

Precautionary statement(s)

Prevention
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P370+P378 In case of fire: Use ... to extinguish.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/\u2026
P331 Do NOT induce vomiting.

Storage
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal
P501 Dispose of contents/container to ...

2.3 Other hazards which do not result in classification

none

3. Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
TRANS-4-OCTENE	TRANS-4-OCTENE	14850-23-8	none	100%

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Brief summary of the analysis

1. The fibers consist of polymers based on several natural amino acids/derivatives. They are biodegradable.

2. The average fiber diameter is a few µm and has internal cavities containing material, i.e. chemical substances. After solvent extraction, chemical compounds could be detected among these substances which are, among other things, toxic, corrosive, harmful to health or hazardous to water

3. The patent EP 1755382 B1 describes applications which make it possible to fill the fibers with agricultural (pesticides…) or medical active ingredients and the like and to use them to target plant (parts) or other "biological systems such as limbs (hands, feet, legs) of humans or animals".

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

What is really important to us!

"WE are project-oriented; what sets us apart is that we only start projects, if we have the means to do so."

Share website

Send the URL of this page of the webinar recording, the presentation slides, patents etc. to your personal environment and your authorities!

social media

Share this information (page links, photos, videos) on social media. Your support is important - become part of this important movement!

information events

Organize information events *(webinar recordings)*, locally, regionally, nationally and internationally. Be brave!

demand investigation

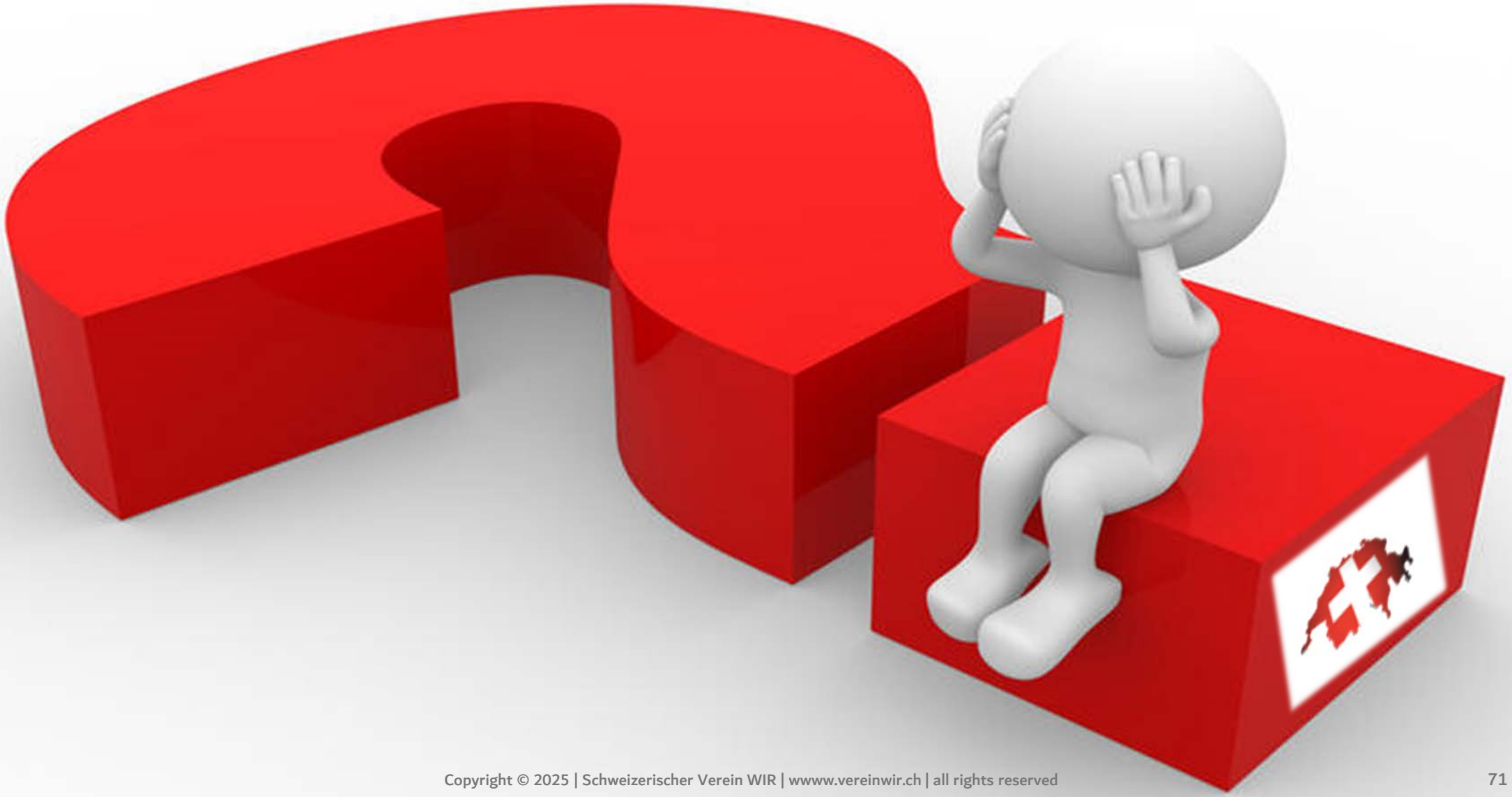
Inform your authorities, politicians and media. Demand an investigation! *(You can find downloads, email templates, data, etc. on our website.)*

www.vereinwir.ch/spinnenfaeden

Information to read, download & share

Copyright © 2025 | Schweizerischer Verein WIR | www.vereinwir.ch | all rights reserved

Q&A session



Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Schweizerischer Verein WIR
Association suisse WIR
Associazione Svizzera WIR
Swiss Association WIR

What YOU can do now!

Please support our WIR activities & projects...

Thanks to your financial support and your activities, it is possible for us to educate the population on current controversial issues and, if necessary, to take legal action against those bodies that disregard our rights and do not comply with their obligations and laws. Thank you very much!

Your moral and financial support is very important to us - and possibly existential for humanity!

Memberships & Donations:
https://www.vereinwir.ch/patenschaft-goenner

Wire Transactions:
IBAN: CH88 0079 0016 6002 4613 9
SWIFT: KBBBCH22XXX
CLEARING: 790

Account Holder:
SCHWEIZERISCHER VEREIN WIR
Postfach 0
3619 Eriz BE
Schweiz

Contact:
Christian Oesch, President
+41 79 329 2448
Christian.Oesch@VereinWir.ch
www.VereinWIR.ch

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved

Swiss Association WIR

Mailing Addresse:

Swiss Association WIR
c/o Christian Oesch, President
Postfach 0
3619 Eriz BE / Schweiz
info@vereinwir.ch

Telegram: https://t.me/VereinWIR
X/Twitter: https://x.com/verein_wir
Website: www.vereinwir.ch
Website: https://www.vereinwir.ch/spinnenfaeden
YouTube: www.youtube.com/@schweizerischervereinwir9191

Copyright © 2025 | Schweizerischer Verein WIR | wwww.vereinwir.ch | all rights reserved